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ВЪКОВЫЯ ВОЗМУЩЕНІЯ
СЕМИ БОЛЬШИХЪ ПЛАНЕТЪ.

ОТДѢЛЕНИЕ ЧЕТВЕРТОЕ.

Возмущенія третьяго порядка относительно эксцентрицитетовъ и наклоненій
планетныхъ орбитъ.

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ВЪЗНОВЛЕНІЕ
СЕНАТОРА
ИМПЕРАТОРСКАЯ АКАДЕМІЯ НАУКЪ

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ОТДѢЛЕНІЕ ЧЕТВЕРТОЕ.

Возмущенія третьяго порядка относительно эксцентритетовъ и наклоненій
планетныхъ орбитъ.

(1). Для опредѣленія возмущеній третьяго порядка относительно эксцентритетовъ и наклоненій планетныхъ орбитъ, функцію возмущеній (см. отд. I, стр. 6)

$$R = m' \left(\frac{xx' + yy' + zz'}{r'^3} - \frac{1}{\rho'} \right),$$

въ которой

$$\rho'^2 = r'^2 + r^2 - 2(xx' + yy' + zz'),$$

надобно разложить до членовъ четвертаго порядка включительно, сообщивъ ей предварительно удобнѣйшій видъ для разложенія по теоремѣ Тейлора. Въ моей запискѣ «Объ эллиптическомъ движеніи планетъ» напечатанной въ III томѣ «Ученыхъ записокъ И. Академіи наукъ по первому и третьему отдѣленіямъ» формулы (52) и (C) даютъ

$$x = r \cos C \cos N - r \sin C \cos J \sin N,$$

$$y = r \cos C \sin N + r \sin C \cos J \cos N,$$

$$z = r \sin C \sin J,$$

гдѣ $C + N = L$; слѣд.

$$x = r \cos L + 2r \sin (L - N) \sin N \sin^2 \frac{1}{2} J,$$

$$y = r \sin L - 2r \sin (L - N) \cos N \sin^2 \frac{1}{2} J,$$

$$z = r \sin (L - N) \sin J$$

и

$$x' = r' \cos L' + 2r' \sin(L' - N') \sin N' \sin^2 \frac{1}{2} J',$$

$$y' = r' \sin L' - 2r' \sin(L' - N') \cos N' \sin^2 \frac{1}{2} J',$$

$$z' = r' \sin(L' - N') \sin J'.$$

Отсюда находимъ

$$xx' + yy' + zz' = rr' \cos(L' - L) + rr'h_2 + rr'h_4,$$

гдѣ

$$h_2 = -(\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \cos(L' - L) + \sin^2 \frac{1}{2} J \cos(L' + L - 2N) + \sin^2 \frac{1}{2} J' \cos(L' + L - 2N') \\ + \frac{1}{2} \sin J' \sin J [\cos(L' - L - N' + N) - \cos(L' + L - N' - N)],$$

$$h_4 = \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J [\cos(L' - L) + \cos(L' - L - 2N' + 2N) - \cos(L' + L - 2N) - \cos(L' + L - 2N')],$$

и потому

$$R = m' \left\{ \frac{rr'}{r'^3} [\cos(L' - L) + h_2 + h_4] - [r'^2 + r^2 - 2rr' \cos(L' - L) - 2rr'h_2 - 2rr'h_4]^{-\frac{1}{2}} \right\} + \dots$$

Прочіе члены этого выраженія имѣютъ ту же форму съ перемѣной массы m' на m'' , m''' , и пр. и L' , r' , J' , N' на L'' , r'' , J'' , N'' , L''' , r''' , J''' , N''' , и пр.; слѣд. можемъ заниматься только разложениемъ перваго члена, который по формулѣ Ньютона превращается въ

$$R = m' \left\{ \frac{rr'}{r'^3} \cos(L' - L) - [r'^2 + r^2 - 2rr' \cos(L' - L)]^{-\frac{1}{2}} \right\} \\ + m' rr' \left\{ \frac{1}{r'^3} - [r'^2 + r^2 - 2rr' \cos(L' - L)]^{-\frac{3}{2}} \right\} h_2 \\ + m' rr' \left\{ \frac{1}{r'^3} - [r'^2 + r^2 - 2rr' \cos(L' - L)]^{-\frac{3}{2}} \right\} h_4 \\ - \frac{3}{2} m' r'^2 r^2 [r'^2 + r^2 - 2rr' \cos(L' - L)]^{-\frac{5}{2}} h_2^2. \quad \left. \begin{array}{l} \\ \\ \\ \end{array} \right\} \dots \dots \dots (1).$$

(2). На стр. 11 и 12 перваго отдѣленія объяснены основанія, на которыхъ производится разложеніе функціи R по теоремѣ Тейлора. На этихъ основаніяхъ, здѣсь первый членъ должно разложить до членовъ, содержащихъ производители четвертаго порядка относительно Δr , $\Delta r'$, Δl и $\Delta l'$; такъ что, положивъ

$$S = \left\{ \frac{rr'}{r'^3} \cos(L' - L) - [r'^2 + r^2 - 2rr' \cos(L' - L)]^{-\frac{1}{2}} \right\},$$

$$S_1 = \frac{a}{a'^2} \cos \beta - [a'^2 + a^2 - 2aa' \cos \beta]^{-\frac{1}{2}} = \frac{1}{2} A^{(0)} + \frac{1}{2} A^{(2)} \cos i\beta,$$

для общей формулы разложенія получимъ:

$$S = S_1 + \frac{dS_1}{da} \Delta r + \frac{dS_1}{da'} \Delta r' + \frac{dS_1}{d\zeta} \Delta l + \frac{dS_1}{d\zeta'} \Delta l'$$

$$\begin{aligned}
& + \frac{1}{2} \left\{ \frac{d^2 S_1}{(da)^2} (\Delta r)^2 + \frac{d^2 S_1}{(da')^2} (\Delta r')^2 + \frac{d^2 S_1}{(d\zeta)^2} (\Delta l)^2 + \frac{d^2 S_1}{(d\zeta')^2} (\Delta l')^2 \right. \\
& \quad + 2 \frac{d^2 S_1}{da da'} \Delta r \Delta r' + 2 \frac{d^2 S_1}{da d\zeta} \Delta r \Delta l + 2 \frac{d^2 S_1}{da d\zeta'} \Delta r \Delta l' + 2 \frac{d^2 S_1}{da' d\zeta} \Delta r' \Delta l \\
& \quad \left. + 2 \frac{d^2 S_1}{da' d\zeta'} \Delta r' \Delta l' + 2 \frac{d^2 S_1}{d\zeta d\zeta'} \Delta l \Delta l' \right\} \\
& + \frac{1}{6} \left\{ \frac{d^3 S_1}{(da)^3} (\Delta r)^3 + \frac{d^3 S_1}{(da')^3} (\Delta r')^3 + \frac{d^3 S_1}{(d\zeta)^3} (\Delta l)^3 + \frac{d^3 S_1}{(d\zeta')^3} (\Delta l')^3 \right. \\
& \quad + 3 \frac{d^3 S_1}{(da)^2 da'} (\Delta r)^2 \Delta r' + 3 \frac{d^3 S_1}{(da)^2 d\zeta} (\Delta r)^2 \Delta l + 3 \frac{d^3 S_1}{(da)^2 d\zeta'} (\Delta r)^2 \Delta l' \\
& \quad + 3 \frac{d^3 S_1}{(da')^2 da} (\Delta r')^2 \Delta r + 3 \frac{d^3 S_1}{(da')^2 d\zeta} (\Delta r')^2 \Delta l + 3 \frac{d^3 S_1}{(da')^2 d\zeta'} (\Delta r')^2 \Delta l' \\
& \quad + 3 \frac{d^3 S_1}{da (d\zeta)^2} \Delta r (\Delta l)^2 + 3 \frac{d^3 S_1}{(d\zeta)^2 da'} (\Delta l)^2 \Delta r' + 3 \frac{d^3 S_1}{(d\zeta)^2 d\zeta'} (\Delta l)^2 \Delta l' \\
& \quad + 3 \frac{d^3 S_1}{(d\zeta')^2 da} (\Delta l')^2 \Delta r + 3 \frac{d^3 S_1}{(d\zeta')^2 da'} (\Delta l')^2 \Delta r' + 3 \frac{d^3 S_1}{(d\zeta')^2 d\zeta} (\Delta l')^2 \Delta l \\
& \quad \left. + 6 \frac{d^3 S_1}{da da' d\zeta} \Delta r \Delta r' \Delta l + 6 \frac{d^3 S_1}{da da' d\zeta'} \Delta r \Delta r' \Delta l' + 6 \frac{d^3 S_1}{da d\zeta d\zeta'} \Delta r \Delta l \Delta l' + 6 \frac{d^3 S_1}{da' d\zeta d\zeta'} \Delta r' \Delta l \Delta l' \right\} \\
& + \frac{1}{24} \left\{ \frac{d^4 S_1}{(da)^4} (\Delta r)^4 + \frac{d^4 S_1}{(da')^4} (\Delta r')^4 + \frac{d^4 S_1}{(d\zeta)^4} (\Delta l)^4 + \frac{d^4 S_1}{(d\zeta')^4} (\Delta l')^4 \right. \\
& \quad + 4 \frac{d^4 S_1}{da (da')^3} \Delta r (\Delta r')^3 + 4 \frac{d^4 S_1}{da (d\zeta)^3} \Delta r (\Delta l)^3 + 4 \frac{d^4 S_1}{da (d\zeta')^3} \Delta r (\Delta l')^3 \\
& \quad + 12 \frac{d^4 S_1}{da da' (d\zeta)^2} \Delta r \Delta r' (\Delta l)^2 + 12 \frac{d^4 S_1}{da da' (d\zeta')^2} \Delta r \Delta r' (\Delta l')^2 + 12 \frac{d^4 S_1}{da (da')^2 d\zeta} \Delta r (\Delta r')^2 \Delta l \\
& \quad + 12 \frac{d^4 S_1}{da (da')^2 d\zeta'} \Delta r (\Delta r')^2 \Delta l' + 12 \frac{d^4 S_1}{da d\zeta (d\zeta')^2} \Delta r \Delta l (\Delta l')^2 + 12 \frac{d^4 S_1}{da (d\zeta)^2 d\zeta'} \Delta r (\Delta l)^2 \Delta l' \\
& \quad + 6 \frac{d^4 S_1}{(da)^2 (da')^2} (\Delta r)^2 (\Delta r')^2 + 6 \frac{d^4 S_1}{(da)^2 (d\zeta)^2} (\Delta r)^2 (\Delta l)^2 + 6 \frac{d^4 S_1}{(da)^2 (d\zeta')^2} (\Delta r)^2 (\Delta l')^2 \\
& \quad + 12 \frac{d^4 S_1}{(da)^2 da' d\zeta} (\Delta r)^2 \Delta r' \Delta l + 12 \frac{d^4 S_1}{(da)^2 da' d\zeta'} (\Delta r)^2 \Delta r' \Delta l' + 12 \frac{d^4 S_1}{(da)^2 d\zeta d\zeta'} (\Delta r)^2 \Delta l \Delta l' \\
& \quad + 4 \frac{d^4 S_1}{(da)^3 da'} (\Delta r)^3 \Delta r' + 4 \frac{d^4 S_1}{(da)^3 d\zeta} (\Delta r)^3 \Delta l + 4 \frac{d^4 S_1}{(da)^3 d\zeta'} (\Delta r)^3 \Delta l' \\
& \quad + 4 \frac{d^4 S_1}{da' (d\zeta)^3} \Delta r' (\Delta l)^3 + 4 \frac{d^4 S_1}{da' (d\zeta')^3} \Delta r' (\Delta l')^3 + 12 \frac{d^4 S_1}{da' (d\zeta)^2 d\zeta'} \Delta r' (\Delta l)^2 \Delta l' \\
& \quad + 12 \frac{d^4 S_1}{da' d\zeta (d\zeta')^2} \Delta r' \Delta l (\Delta l')^2 + 6 \frac{d^4 S_1}{(da')^2 (d\zeta)^2} (\Delta r')^2 (\Delta l)^2 + 6 \frac{d^4 S_1}{(da')^2 (d\zeta')^2} (\Delta r')^2 (\Delta l')^2 \\
& \quad + 12 \frac{d^4 S_1}{(da')^2 d\zeta d\zeta'} (\Delta r')^2 \Delta l \Delta l' + 4 \frac{d^4 S_1}{(da')^3 d\zeta} (\Delta r')^3 \Delta l + 4 \frac{d^4 S_1}{(da')^3 d\zeta'} (\Delta r')^3 \Delta l' \\
& \quad \left. + 4 \frac{d^4 S_1}{d\zeta (d\zeta')^3} \Delta l (\Delta l')^3 + 6 \frac{d^4 S_1}{(d\zeta)^2 (d\zeta')^2} (\Delta l)^2 (\Delta l')^2 + 4 \frac{d^4 S_1}{(d\zeta)^3 d\zeta'} (\Delta l)^3 \Delta l' + 24 \frac{d^4 S_1}{da da' d\zeta d\zeta'} \Delta r \Delta r' \Delta l \Delta l' \right\}.
\end{aligned}$$

*

Для показанныхъ здѣсь дифференцированій потребны слѣдующія вспомогательныя формулы, происходящія отъ симетріи коэффициента $A^{(i)}$ относительно a и a' :

$$\begin{aligned} a' \frac{dA^{(i)}}{da'} &= -A^{(i)} - a \frac{dA^{(i)}}{da}, \\ a' \frac{d^2A^{(i)}}{da'da} &= -2 \frac{dA^{(i)}}{da} - a \frac{d^2A^{(i)}}{(da)^2}, \\ a'^2 \frac{d^2A^{(i)}}{(da')^2} &= 2A^{(i)} + 4a \frac{dA^{(i)}}{da} + a^2 \frac{d^2A^{(i)}}{(da)^2}, \\ a'^2 \frac{d^3A^{(i)}}{da'(da')^2} &= 6 \frac{dA^{(i)}}{da} + 6a \frac{d^2A^{(i)}}{(da)^2} + a^2 \frac{d^3A^{(i)}}{(da)^3}, \\ a'^3 \frac{d^3A^{(i)}}{(da')^3} &= -6A^{(i)} - 18a \frac{dA^{(i)}}{da} - 9a^2 \frac{d^2A^{(i)}}{(da)^2} - a^3 \frac{d^3A^{(i)}}{(da)^3}, \\ a' \frac{d^3A^{(i)}}{da'(da)^2} &= -3 \frac{d^2A^{(i)}}{(da)^2} - a \frac{d^3A^{(i)}}{(da)^3}, \\ a'^4 \frac{d^4A^{(i)}}{(da')^4} &= 24A^{(i)} + 96a \frac{dA^{(i)}}{da} + 72a^2 \frac{d^2A^{(i)}}{(da)^2} + 16a^3 \frac{d^3A^{(i)}}{(da)^3} + a^4 \frac{d^4A^{(i)}}{(da)^4}, \\ a'^3 \frac{d^4A^{(i)}}{da'(da')^3} &= -24 \frac{dA^{(i)}}{da} - 36a \frac{d^2A^{(i)}}{(da)^2} - 12a^2 \frac{d^3A^{(i)}}{(da)^3} - a^3 \frac{d^4A^{(i)}}{(da)^4}, \\ a'^2 \frac{d^4A^{(i)}}{(da')^2(da')^2} &= 12 \frac{d^2A^{(i)}}{(da)^2} + 8a \frac{d^3A^{(i)}}{(da)^3} + a^2 \frac{d^4A^{(i)}}{(da)^4}, \\ a' \frac{d^4A^{(i)}}{(da)^3 da'} &= -4 \frac{d^3A^{(i)}}{(da)^3} - a \frac{d^4A^{(i)}}{(da)^4}. \end{aligned}$$

(3). Посредствомъ всѣхъ этихъ формулъ, найдемъ:

$$\begin{aligned} S &= \frac{1}{2}A^{(0)} \left[1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 - \left(\frac{\Delta r'}{a'} \right)^3 + \left(\frac{\Delta r'}{a'} \right)^4 \right] \\ &\quad - \frac{1}{2}a \frac{dA^{(0)}}{da} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left[1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'} \right)^2 - 4 \left(\frac{\Delta r'}{a'} \right)^3 \right] \\ &\quad + \frac{1}{4}a^2 \frac{d^2A^{(0)}}{(da)^2} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^2 \left[1 - 3 \frac{\Delta r'}{a'} + 6 \left(\frac{\Delta r'}{a'} \right)^2 \right] \\ &\quad - \frac{1}{12}a^3 \frac{d^3A^{(0)}}{(da)^3} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^2 \left(1 - 4 \frac{\Delta r'}{a'} \right) + \frac{1}{48}a^4 \frac{d^4A^{(0)}}{(da)^4} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^4 \\ &\quad + \cos i\beta \left\{ \frac{1}{2}A^{(i)} \left[1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 - \left(\frac{\Delta r'}{a'} \right)^3 + \left(\frac{\Delta r'}{a'} \right)^4 - \frac{i^2}{2}(\Delta l' - \Delta l)^2 \left(1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 \right) \right. \right. \\ &\quad \left. \left. + \frac{i^4}{24}(\Delta l' - \Delta l)^4 \right] \right. \\ &\quad - \frac{1}{2}a \frac{dA^{(i)}}{da} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left[1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'} \right)^2 - 4 \left(\frac{\Delta r'}{a'} \right)^3 - \frac{i^2}{2} \left(1 - 2 \frac{\Delta r'}{a'} \right) (\Delta l' - \Delta l)^2 \right] \\ &\quad + \frac{1}{4}a^2 \frac{d^2A^{(i)}}{(da)^2} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^2 \left[1 - 3 \frac{\Delta r'}{a'} + 6 \left(\frac{\Delta r'}{a'} \right)^2 - \frac{i^2}{2}(\Delta l' - \Delta l)^2 \right] \\ &\quad \left. - \frac{1}{12}a^3 \frac{d^3A^{(i)}}{(da)^3} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^3 \left(1 - 4 \frac{\Delta r'}{a'} \right) + \frac{1}{48}a^4 \frac{d^4A^{(i)}}{(da)^4} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^4 \right\} \end{aligned}$$

$$+ \sin i \beta \left\{ -\frac{i}{2} A^{(i)} \left[\left(1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 - \left(\frac{\Delta r'}{a'} \right)^3 \right) (\Delta l' - \Delta l) - \frac{i^2}{6} \left(1 - \frac{\Delta r'}{a'} \right) (\Delta l' - \Delta l)^3 \right] \right. \\ \left. + \frac{i}{2} a \frac{dA^{(i)}}{da} \left[\left(1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'} \right)^2 \right) \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) (\Delta l' - \Delta l) - \frac{i^2}{6} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) (\Delta l' - \Delta l)^3 \right] \right. \\ \left. - \frac{i}{4} a^2 \frac{d^2 A^{(i)}}{(da)^2} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^2 \left(1 - 3 \frac{\Delta r'}{a'} \right) (\Delta l' - \Delta l) + \frac{i}{12} a^3 \frac{d^3 A^{(i)}}{(da)^3} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^3 (\Delta l' - \Delta l) \right\}.$$

(4). Когда чрезъ m изобразимъ среднюю аномалію планеты, тогда будемъ имѣть:

$$\begin{aligned} \frac{\Delta r}{a} &= \frac{1}{2} f^2 - (f - \frac{3}{8} f^3) \cos m - (\frac{1}{2} f^2 - \frac{1}{3} f^4) \cos 2m - \frac{3}{8} f^3 \cos 3m - \frac{1}{3} f^4 \cos 4m, \\ \left(\frac{\Delta r}{a} \right)^2 &= \frac{1}{2} f^2 - \frac{1}{2} f^3 \cos m + \frac{1}{2} (f^2 - f^4) \cos 2m + \frac{1}{2} f^3 \cos 3m + \frac{1}{2} f^4 \cos 4m, \\ \left(\frac{\Delta r}{a} \right)^3 &= \frac{3}{8} f^4 - \frac{3}{4} f^3 \cos m - \frac{1}{4} f^3 \cos 3m - \frac{3}{8} f^4 \cos 4m, \\ \left(\frac{\Delta r}{a} \right)^4 &= \frac{3}{8} f^4 + \frac{1}{2} f^4 \cos 2m + \frac{1}{8} f^4 \cos 4m, \\ \Delta l &= (2f - \frac{1}{4} f^3) \sin m + (\frac{5}{4} f^2 - \frac{11}{24} f^4) \sin 2m + \frac{13}{12} f^3 \sin 3m + \frac{103}{96} f^4 \sin 4m, \\ (\Delta l)^2 &= 2f^2 + \frac{9}{32} f^4 + \frac{5}{2} f^3 \cos m - (2f^2 - \frac{8}{3} f^4) \cos 2m - \frac{5}{2} f^3 \cos 3m - \frac{283}{96} f^4 \cos 4m, \\ (\Delta l)^3 &= 6f^3 \sin m + \frac{15}{2} f^4 \sin 2m - 2f^3 \sin 3m - \frac{15}{4} f^4 \sin 4m, \\ (\Delta l)^4 &= 6f^4 - 8f^4 \cos 2m + 2f^4 \cos 4m. \end{aligned}$$

Отсюда выходитъ:

$$\begin{aligned} \frac{\Delta r'}{a} - \frac{\Delta r}{a} &= \frac{1}{2} f'^2 - \frac{1}{2} f^2 - (f' - \frac{3}{8} f'^3) \cos m' + (f - \frac{3}{8} f^3) \cos m - (\frac{1}{2} f'^2 - \frac{1}{3} f'^4) \cos 2m' \\ &\quad + (\frac{1}{2} f^2 - \frac{1}{3} f^4) \cos 2m - \frac{3}{8} f'^3 \cos 3m' + \frac{3}{8} f^3 \cos 3m - \frac{1}{3} f'^4 \cos 4m' + \frac{1}{3} f^4 \cos 4m, \\ \left(\frac{\Delta r'}{a} - \frac{\Delta r}{a} \right)^2 &= \frac{1}{2} f'^2 + \frac{1}{2} f^2 - \frac{1}{2} f'^2 f'^2 + (f'^2 f' - \frac{1}{2} f'^3) \cos m' + (ff'^2 - \frac{1}{2} f^3) \cos m + (\frac{1}{2} f'^2 + \frac{1}{2} f^2 f'^2 - \frac{1}{2} f'^4) \cos 2m' \\ &\quad + (\frac{1}{2} f^2 + \frac{1}{2} f^2 f'^2 - \frac{1}{2} f^4) \cos 2m + \frac{1}{2} f'^3 \cos 3m' + \frac{1}{2} f^3 \cos 3m + \frac{1}{2} f'^4 \cos 4m' + \frac{1}{2} f^4 \cos 4m \\ &\quad - (ff' - \frac{3}{8} f^3 f' - \frac{3}{8} ff'^3) [\cos(m' + m) + \cos(m' - m)] - \frac{1}{2} f'^2 f' [\cos(m' + 2m) + \cos(m' - 2m)] \\ &\quad - \frac{1}{2} ff'^2 [\cos(2m' + m) + \cos(2m' - m)] - \frac{1}{4} f'^2 f'^2 [\cos(2m' + 2m) + \cos(2m' - 2m)] \\ &\quad - \frac{3}{8} f^3 f' [\cos(m' + 3m) + \cos(m' - 3m)] - \frac{3}{8} ff'^3 [\cos(3m' + m) + \cos(3m' - m)], \\ \left(\frac{\Delta r'}{a} - \frac{\Delta r}{a} \right)^3 &= \frac{3}{8} f'^4 - \frac{3}{8} f^4 - (\frac{3}{2} f' f'^2 + \frac{3}{4} f'^3) \cos m' + (\frac{3}{2} ff'^2 + \frac{3}{4} f^3) \cos m - \frac{3}{2} f'^2 f'^2 \cos 2m' + \frac{3}{2} f^2 f'^2 \cos 2m \\ &\quad - \frac{1}{4} f'^3 \cos 3m' + \frac{1}{4} f^3 \cos 3m - \frac{3}{8} f'^4 \cos 4m' + \frac{3}{8} f^4 \cos 4m - \frac{3}{4} f'^2 f' [\cos(m' + 2m) + \cos(m' - 2m)] \\ &\quad + \frac{3}{4} ff'^2 [\cos(2m' + m) + \cos(2m' - m)] + (\frac{3}{4} f^3 f' - \frac{3}{4} ff'^3) [\cos(m' + m) + \cos(m' - m)] \\ &\quad - \frac{3}{4} f^3 f' [\cos(m' + 3m) + \cos(m' - 3m)] + \frac{3}{4} ff'^3 [\cos(3m' + m) + \cos(3m' - m)], \\ \left(\frac{\Delta r'}{a} - \frac{\Delta r}{a} \right)^4 &= \frac{3}{8} f'^4 + \frac{3}{8} f^4 + \frac{3}{2} f'^2 f'^2 + (\frac{3}{2} f'^2 f'^2 + \frac{1}{2} f'^4) \cos 2m' + (\frac{3}{2} f^2 f'^2 + \frac{1}{2} f^4) \cos 2m + \frac{1}{8} f'^4 \cos 4m' \\ &\quad + \frac{1}{8} f^4 \cos 4m - (\frac{3}{2} f^3 f' + \frac{3}{2} ff'^3) [\cos(m' + m) + \cos(m' - m)] + \frac{3}{4} f'^2 f'^2 [\cos(2m' + 2m) + \cos(2m' - 2m)] \\ &\quad - \frac{1}{2} f^3 f' [\cos(m' + 3m) + \cos(m' - 3m)] - \frac{1}{2} ff'^3 [\cos(3m' + m) + \cos(3m' - m)]. \end{aligned}$$

Потомъ

$$\Delta l' - \Delta l = (2f' - \frac{1}{4}f'^3) \sin m' - (2f - \frac{1}{4}f^3) \sin m + (\frac{5}{4}f'^2 - \frac{11}{24}f'^4) \sin 2m' - (\frac{5}{4}f^2 - \frac{11}{24}f^4) \sin 2m \\ + \frac{13}{12}f'^3 \sin 3m' - \frac{13}{12}f^3 \sin 3m + \frac{103}{96}f'^4 \sin 4m' - \frac{103}{96}f^4 \sin 4m,$$

$$(\Delta l' - \Delta l)^2 = 2f'^2 + 2f^2 + \frac{9}{32}f'^4 + \frac{9}{32}f^4 + \frac{5}{2}f'^3 \cos m' + \frac{5}{2}f^3 \cos m - (2f'^2 - \frac{8}{3}f'^4) \cos 2m' \\ - (2f^2 - \frac{8}{3}f^4) \cos 2m - \frac{5}{2}f'^3 \cos 3m' - \frac{5}{2}f^3 \cos 3m - \frac{283}{96}f'^4 \cos 4m' - \frac{283}{96}f^4 \cos 4m \\ + (4ff' - \frac{1}{2}f^3f' - \frac{1}{2}ff'^3)[\cos(m'+m) - \cos(m'-m)] + \frac{5}{2}f'^2f'[\cos(m'+2m) - \cos(m'-2m)] \\ + \frac{5}{2}ff'^2[\cos(2m'+m) - \cos(2m'-m)] + \frac{25}{16}f'^2f'^2[\cos(2m'+2m) - \cos(2m'-2m)] \\ + \frac{13}{6}f'^3f'[\cos(m'+3m) - \cos(m'-3m)] + \frac{13}{6}ff'^3[\cos(3m'+m) - \cos(3m'-m)],$$

$$(\Delta l' - \Delta l)^3 = (12f'^2f' + 6f'^3) \sin m' - (12ff'^2 + 6f^3) \sin m + (\frac{15}{2}f'^2f'^2 + \frac{15}{2}f'^4) \sin 2m' \\ - (\frac{15}{2}f^2f'^2 + \frac{15}{2}f^4) \sin 2m - 2f'^3 \sin 3m' + 2f^3 \sin 3m - \frac{15}{4}f'^4 \sin 4m' + \frac{15}{4}f^4 \sin 4m \\ - 6f'^2f'[\sin(m'+2m) + \sin(m'-2m)] + 6ff'^2[\sin(2m'+m) - \sin(2m'-m)] \\ + \frac{15}{2}f'^3f'[\sin(m'+m) + \sin(m'-m)] - \frac{15}{2}ff'^3[\sin(m'+m) - \sin(m'-m)] \\ - \frac{15}{2}f'^2f'^2 \sin(2m' - 2m) - \frac{15}{2}f^3f'[\sin(m'+3m) + \sin(m'-3m)] \\ + \frac{15}{2}ff'^3[\sin(3m'+m) - \sin(3m'-m)],$$

$$(\Delta l' - \Delta l)^4 = 6f'^4 + 6f^4 + 24f'^2f'^2 - (24f'^2f'^2 + 8f'^4) \cos 2m' - (24f^2f'^2 + 8f^4) \cos 2m + 2f'^4 \cos 4m' \\ + 2f^4 \cos 4m + 12f'^2f'^2[\cos(2m' + 2m) + \cos(2m' - 2m)] \\ + 24(f^3f' + ff'^3)[\cos(m'+m) - \cos(m'-m)] - 8f'^3f'[\cos(m'+3m) - \cos(m'-3m)] \\ - 8ff'^3[\cos(3m'+m) + \cos(3m'-m)].$$

(5). Послѣ этихъ предварительныхъ формулъ можемъ уже составить выраженія *аргументовъ*, содержащихся въ общемъ разложѣніи функции S ; именно:

$$1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'}\right)^2 - \left(\frac{\Delta r'}{a'}\right)^3 + \left(\frac{\Delta r'}{a'}\right)^4 = 1 + (f' - \frac{1}{8}f'^3) \cos m' + (f'^2 - \frac{1}{3}f'^4) \cos 2m' + \frac{9}{8}f'^3 \cos 3m' \\ + \frac{4}{3}f'^4 \cos 4m',$$

$$1 - 2\frac{\Delta r'}{a'} + 3\left(\frac{\Delta r'}{a'}\right)^2 - 4\left(\frac{\Delta r'}{a'}\right)^3 = 1 + \frac{1}{2}f'^2 - \frac{3}{2}f'^4 + (2f' + \frac{3}{4}f'^3) \cos m' + (\frac{5}{2}f'^2 - \frac{13}{6}f'^4) \cos 2m' \\ + \frac{13}{4}f'^3 \cos 3m' + \frac{11}{3}f'^4 \cos 4m',$$

$$\begin{aligned} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right) \left(1 - 2\frac{\Delta r'}{a'} + 3\left(\frac{\Delta r'}{a'}\right)^2 - 4\left(\frac{\Delta r'}{a'}\right)^3\right) = & -\frac{1}{2}f'^2 - \frac{1}{2}f'^2 - \frac{1}{4}f'^2f'^2 - \frac{3}{8}f'^4 - (f' + f'^2f' + \frac{7}{8}f'^3)\cos m' \\ & + (f + \frac{1}{2}ff'^2 - \frac{3}{8}f^3)\cos m - (\frac{3}{2}f'^2 + \frac{5}{4}f'^2f'^2 + \frac{2}{3}f'^4)\cos 2m' \\ & + (\frac{1}{2}f'^2 + \frac{1}{4}f'^2f'^2 - \frac{1}{3}f'^4)\cos 2m - \frac{17}{8}f'^3\cos 3m' \\ & + \frac{3}{8}f'^3\cos 3m - \frac{71}{24}f'^4\cos 4m' + \frac{1}{3}f'^4\cos 4m \\ & + (ff' - \frac{3}{8}f^3f' + \frac{3}{8}ff'^3)[\cos(m' + m) + \cos(m' - m)] \\ & + \frac{1}{2}f'^2f'[\cos(m' + 2m) + \cos(m' - 2m)] \\ & + \frac{5}{4}ff'^2[\cos(2m' + m) + \cos(2m' - m)] \\ & + \frac{5}{8}f'^2f'^2[\cos(2m' + 2m) + \cos(2m' - 2m)] \\ & + \frac{3}{8}f^3f'[\cos(m' + 3m) + \cos(m' - 3m)] \\ & + \frac{13}{8}ff'^3[\cos(3m' + m) + \cos(3m' - m)], \end{aligned}$$

$$1 - 3\frac{\Delta r'}{a'} + 6\left(\frac{\Delta r'}{a'}\right)^2 = 1 + \frac{3}{2}f'^2 + (3f' - \frac{33}{8}f'^3)\cos m' + (\frac{9}{2}f'^2 - 4f'^4)\cos 2m' + \frac{33}{8}f'^3\cos 3m' + 4f'^4\cos 4m',$$

$$\begin{aligned} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)^2 \left(1 - 3\frac{\Delta r'}{a'} + 6\left(\frac{\Delta r'}{a'}\right)^2\right) = & \frac{1}{2}f'^2 + \frac{1}{2}f'^2 + \frac{7}{4}f'^2f'^2 + \frac{9}{8}f'^4 + (\frac{5}{8}f'^2f' + \frac{7}{4}f'^3)\cos m' \\ & - (2ff'^2 + \frac{1}{3}f^3)\cos m + (\frac{1}{2}f'^2 + \frac{17}{4}f'^2f'^2 + \frac{10}{4}f'^4)\cos 2m' \\ & + (\frac{1}{2}f'^2 - \frac{1}{4}f'^2f'^2 - \frac{1}{2}f'^4)\cos 2m + \frac{5}{4}f'^3\cos 3m' + \frac{1}{2}f'^3\cos 3m + \frac{19}{8}f'^4\cos 4m' \\ & + \frac{1}{2}f'^4\cos 4m - (ff' + \frac{3}{8}f^3f' + \frac{21}{8}ff'^3)[\cos(m' + m) + \cos(m' - m)] \\ & + \frac{1}{4}f'^2f'[\cos(m' + 2m) + \cos(m' - 2m)] \\ & - 2ff'^2[\cos(2m' + m) + \cos(2m' - m)] \\ & + \frac{1}{8}f'^2f'^2[\cos(2m' + 2m) + \cos(2m' - 2m)] \\ & + \frac{3}{8}f^3f'[\cos(m' + 3m) + \cos(m' - 3m)] \\ & - \frac{27}{8}ff'^3[\cos(3m' + m) + \cos(3m' - m)], \end{aligned}$$

$$\begin{aligned} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)^3 \left(1 - 4\frac{\Delta r'}{a'}\right) = & -\frac{9}{8}f'^4 - \frac{3}{8}f'^4 - 3f'^2f'^2 - (\frac{3}{2}f'^2f' + \frac{3}{4}f'^3)\cos m' + (\frac{3}{2}ff'^2 + \frac{3}{4}f^3)\cos m \\ & - (\frac{9}{2}f'^2f'^2 + 2f'^4)\cos 2m' - \frac{3}{2}f'^2f'^2\cos 2m - \frac{1}{4}f'^3\cos 3m' + \frac{1}{4}f^3\cos 3m \\ & - \frac{7}{8}f'^4\cos 4m' + \frac{3}{8}f'^4\cos 4m - \frac{3}{4}f'^2f'[\cos(m' + 2m) + \cos(m' - 2m)] \\ & + \frac{3}{4}ff'^2[\cos(2m' + m) + \cos(2m' - m)] - \frac{3}{2}f'^2f'^2[\cos(2m' + 2m) + \cos(2m' - 2m)] \\ & + (\frac{15}{4}ff'^3 + \frac{9}{4}f^3f')[\cos(m' + m) + \cos(m' - m)] \\ & - \frac{1}{4}f^3f'[\cos(m' + 3m) + \cos(m' - 3m)] + \frac{9}{4}ff'^3[\cos(3m' + m) + \cos(3m' - m)], \end{aligned}$$

$$\begin{aligned} \frac{\Delta r'}{a'} (\Delta l' - \Delta l)^2 = & \frac{1}{4} f'^4 + f^2 f'^2 - (2f^2 f' + f'^3) \cos m' - (f^2 f'^2 + 2f'^4) \cos 2m' - f^2 f'^2 \cos 2m + f'^3 \cos 3m' \\ & + \frac{7}{4} f'^4 \cos 4m' + f^2 f' [\cos(m' + 2m) + \cos(m' - 2m)] - 2ff'^2 [\cos(2m' + m) - \cos(2m' - m)] \\ & - \frac{1}{4} f^2 f'^2 [3 \cos(2m' + 2m) - 7 \cos(2m' - 2m)] + \frac{7}{4} ff'^3 [\cos(m' + m) - \cos(m' - m)] \\ & - \frac{5}{4} f^3 f' [\cos(m' + m) + \cos(m' - m)] + \frac{5}{4} f^3 f' [\cos(m' + 3m) + \cos(m' - 3m)] \\ & - \frac{9}{4} ff'^3 [\cos(3m' + m) - \cos(3m' - m)], \end{aligned}$$

$$\begin{aligned} \frac{\Delta r'}{a'} (\Delta l' - \Delta l)^3 = & - (6f^2 f'^2 + 2f'^4) \sin 2m' + f'^4 \sin 4m' + (3f^3 f' + 3ff'^3) [\sin(m' + m) - \sin(m' - m)] \\ & + 3f^2 f'^2 [\sin(2m' + 2m) + \sin(2m' - 2m)] - f^3 f' [\sin(m' + 3m) - \sin(m' - 3m)] \\ & - 3ff'^3 [\sin(3m' + m) - \sin(3m' - m)], \end{aligned}$$

$$\begin{aligned} \left(\frac{\Delta r'}{a'} \right)^2 (\Delta l' - \Delta l)^2 = & \frac{1}{2} f'^4 + f^2 f'^2 + f^2 f'^2 \cos 2m' - f^2 f'^2 \cos 2m - \frac{1}{2} f'^4 \cos 4m' \\ & - \frac{1}{2} f^2 f'^2 [\cos(2m' + 2m) + \cos(2m' - 2m)] + ff'^3 [\cos(m' + m) - \cos(m' - m)] \\ & + ff'^3 [\cos(3m' + m) - \cos(3m' - m)], \end{aligned}$$

$$\begin{aligned} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left(1 - 2 \frac{\Delta r'}{a'} \right) = & - \frac{1}{2} f'^2 - \frac{1}{2} f^2 + \frac{1}{2} f^2 f'^2 - (f' + f^2 f' - \frac{11}{8} f'^3) \cos m' + (f - ff'^2 - \frac{3}{8} f^3) \cos m \\ & - (\frac{3}{2} f'^2 + \frac{1}{2} f^2 f'^2 - \frac{4}{3} f'^4) \cos 2m' + (\frac{1}{2} f^2 - \frac{1}{2} f^2 f'^2 - \frac{1}{3} f^4) \cos 2m \\ & - \frac{11}{8} f'^3 \cos 3m' + \frac{3}{8} f^3 \cos 3m - \frac{4}{3} f'^4 \cos 4m' + \frac{1}{3} f^4 \cos 4m \\ & + (ff' - \frac{3}{8} f^3 f' - \frac{3}{8} ff'^3) [\cos(m' + m) + \cos(m' - m)] \\ & + \frac{1}{2} f^2 f' [\cos(m' + 2m) + \cos(m' - 2m)] + \frac{1}{2} ff'^2 [\cos(2m' + m) + \cos(2m' - m)] \\ & + \frac{1}{4} f^2 f'^2 [\cos(2m' + 2m) + \cos(2m' - 2m)] + \frac{3}{8} f^3 f' [\cos(m' + 3m) + \cos(m' - 3m)] \\ & + \frac{3}{8} ff'^3 [\cos(3m' + m) + \cos(3m' - m)], \end{aligned}$$

$$\begin{aligned} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left(1 - 2 \frac{\Delta r'}{a'} \right) (\Delta l' - \Delta l)^2 = & - \frac{3}{4} f'^4 - \frac{1}{4} f^4 - 2f^2 f'^2 - (2f^2 f' + f'^3) \cos m' + (2ff'^2 + f^3) \cos m \\ & - (2f^2 f'^2 + 2f'^4) \cos 2m' + (2f^2 f'^2 + 2f^4) \cos 2m + f'^3 \cos 3m' \\ & - f^3 \cos 3m + \frac{11}{4} f'^4 \cos 4m' - \frac{7}{4} f^4 \cos 4m \\ & + f^2 f' [3 \cos(m' + 2m) - \cos(m' - 2m)] \\ & - ff'^2 [3 \cos(2m' + m) - \cos(2m' - m)] \\ & + f^2 f'^2 [3 \cos(2m' + 2m) - \cos(2m' - 2m)] \\ & - \frac{1}{2} f^3 f' [4 \cos(m' + m) - 3 \cos(m' - m)] \\ & + \frac{1}{2} ff'^3 [4 \cos(m' + m) + 5 \cos(m' - m)] \\ & + \frac{1}{2} f^3 f' [5 \cos(m' + 3m) - 4 \cos(m' - 3m)] \\ & - \frac{1}{2} ff'^3 [13 \cos(3m' + m) - 4 \cos(3m' - m)], \end{aligned}$$

$$\begin{aligned} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)^2 (\Delta l' - \Delta l)^2 = & \frac{1}{2} f'^4 + \frac{1}{2} f^4 + 2 f^2 f'^2 - \frac{1}{2} f'^4 \cos 4m' - \frac{1}{2} f^4 \cos 4m \\ & - f^2 f'^2 [3 \cos(2m' + 2m) - \cos(2m' - 2m)] - (2 f^3 f' + 2 f f'^3) \cos(m' - m) \\ & + 2 f^3 f' \cos(m' + 3m) + 2 f f'^3 \cos(3m' + m), \end{aligned}$$

$$\begin{aligned} 1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'}\right)^2 - \left(\frac{\Delta r'}{a'}\right)^3 = & 1 - \frac{3}{8} f'^4 + (f' - \frac{1}{8} f'^3) \cos m' + (f'^2 - \frac{5}{6} f'^4) \cos 2m' + \frac{9}{8} f'^3 \cos 3m' \\ & + \frac{29}{24} f'^4 \cos 4m', \end{aligned}$$

$$\begin{aligned} \left(1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'}\right)^2 - \left(\frac{\Delta r'}{a'}\right)^3\right) (\Delta l' - \Delta l) = & (2f' - \frac{5}{8} f'^3) \sin m' - (2f - \frac{1}{4} f^3) \sin m + (\frac{9}{4} f'^2 - \frac{31}{24} f'^4) \sin 2m' \\ & - (\frac{5}{4} f'^2 - \frac{11}{24} f'^4) \sin 2m + \frac{65}{24} f'^3 \sin 3m' - \frac{13}{12} f^3 \sin 3m \\ & + \frac{303}{96} f'^4 \sin 4m' - \frac{103}{96} f^4 \sin 4m \\ & - (ff' - \frac{1}{8} f^3 f' - \frac{1}{8} f f'^3) [\sin(m' + m) - \sin(m' - m)] \\ & - \frac{5}{8} f^2 f' [\sin(m' + 2m) - \sin(m' - 2m)] \\ & - f f'^2 [\sin(2m' + m) - \sin(2m' - m)] \\ & - \frac{5}{8} f^2 f'^2 [\sin(2m' + 2m) - \sin(2m' - 2m)] \\ & - \frac{13}{24} f^3 f' [\sin(m' + 3m) - \sin(m' - 3m)] \\ & - \frac{9}{8} f f'^3 [\sin(3m' + m) - \sin(3m' - m)], \end{aligned}$$

$$\begin{aligned} 1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'}\right)^2 = & 1 + \frac{1}{2} f'^2 + (2f' - \frac{9}{4} f'^3) \cos m' + (\frac{5}{2} f'^2 - \frac{13}{6} f'^4) \cos 2m' + \frac{9}{4} f'^3 \cos 3m' \\ & + \frac{13}{6} f'^4 \cos 4m', \end{aligned}$$

$$\begin{aligned} \left(1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'}\right)^2\right) \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right) = & -\frac{1}{2} f'^2 - \frac{1}{2} f^2 - \frac{1}{4} f^2 f'^2 + \frac{9}{8} f'^4 - (f' + f^2 f' + \frac{7}{8} f'^3) \cos m' \\ & + (f + \frac{1}{2} f f'^2 - \frac{3}{8} f^3) \cos m - (\frac{3}{2} f'^2 + \frac{5}{4} f^2 f'^2 - \frac{4}{3} f'^4) \cos 2m' \\ & + (\frac{1}{2} f^2 + \frac{1}{4} f^2 f'^2 - \frac{1}{3} f^4) \cos 2m - \frac{17}{8} f'^3 \cos 3m' \\ & + \frac{3}{8} f^3 \cos 3m - \frac{59}{24} f'^4 \cos 4m' + \frac{1}{3} f^4 \cos 4m \\ & + (ff' - \frac{3}{8} f^3 f' - \frac{9}{8} f f'^3) [\cos(m' + m) + \cos(m' - m)] \\ & + \frac{1}{2} f^2 f' [\cos(m' + 2m) + \cos(m' - 2m)] \\ & + \frac{5}{4} f f'^2 [\cos(2m' + m) + \cos(2m' - m)] \\ & + \frac{5}{8} f^2 f'^2 [\cos(2m' + 2m) + \cos(2m' - 2m)] \\ & + \frac{3}{8} f^3 f' [\cos(m' + 3m) + \cos(m' - 3m)] \\ & + \frac{9}{8} f f'^3 [\cos(3m' + m) + \cos(3m' - m)], \end{aligned}$$

$$\begin{aligned}
\left(1 - 2\frac{\Delta r'}{a'} + 3\left(\frac{\Delta r'}{a'}\right)^2\right)\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)(\Delta l' - \Delta l) = & - (f^2 f' + \frac{1}{8} f'^3) \sin m' + (ff'^2 + \frac{7}{8} f^3) \sin m \\
& - (f'^2 + \frac{13}{8} f^2 f'^2 - \frac{5}{24} f'^4) \sin 2m' - (f^2 - \frac{1}{8} f^2 f'^2 - \frac{23}{24} f^4) \sin 2m \\
& - \frac{17}{8} f^3 \sin 3m' - \frac{9}{8} f^3 \sin 3m - \frac{173}{48} f'^4 \sin 4m' - \frac{59}{48} f^4 \sin 4m \\
& + (2ff' + \frac{3}{8} f^3 f' + \frac{5}{8} ff'^3) \sin (m' + m) \\
& - (\frac{9}{8} f^3 f' + \frac{9}{8} ff'^3) \sin (m' - m) \\
& + \frac{1}{8} f^2 f' [\sin (m' + 2m) + 7 \sin (m' - 2m)] \\
& + \frac{1}{8} ff'^2 [25 \sin (2m' + m) + \sin (2m' - m)] \\
& + \frac{1}{8} f^2 f'^2 [4 \sin (2m' + 2m) + 9 \sin (2m' - 2m)] \\
& - \frac{1}{24} f^3 f' [5 \sin (m' + 3m) - 23 \sin (m' - 3m)] \\
& + \frac{1}{24} ff'^3 [109 \sin (3m' + m) + 7 \sin (3m' - m)],
\end{aligned}$$

$$\begin{aligned}
\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)(\Delta l' - \Delta l)^3 = & - (6f^2 f'^2 + 2f'^4) \sin 2m' - (6f^2 f'^2 + 2f^4) \sin 2m + f'^4 \sin 4m' \\
& + f^4 \sin 4m + (6f^3 f' + 6ff'^3) \sin (m' + m) + 6f^2 f'^2 \sin (2m' + 2m) \\
& - f^3 f' [4 \sin (m' + 3m) + 2 \sin (m' - 3m)] - ff'^3 [4 \sin (3m' + m) - 2 \sin (3m' - m)],
\end{aligned}$$

$$\begin{aligned}
\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)^2 \left(1 - 3\frac{\Delta r'}{a'}\right) = & \frac{1}{2} f'^2 + \frac{1}{2} f^2 + \frac{1}{4} f^2 f'^2 - \frac{9}{8} f'^4 + (\frac{1}{2} f'^2 + \frac{11}{4} f^2 f' - \frac{1}{2} f'^4) \cos 2m' \\
& + (\frac{5}{2} f^2 f' + \frac{7}{4} f'^3) \cos m' - (2ff'^2 + \frac{1}{2} f^3) \cos m + (\frac{1}{2} f^2 - \frac{7}{4} f^2 f'^2 - \frac{1}{2} f^4) \cos 2m \\
& + \frac{5}{4} f'^3 \cos 3m' + \frac{1}{2} f^3 \cos 3m + \frac{13}{8} f'^4 \cos 4m' + \frac{1}{2} f^4 \cos 4m \\
& - (ff' + \frac{3}{8} f^3 f' + \frac{3}{4} ff'^3) [\cos (m' + m) + \cos (m' - m)] \\
& + \frac{1}{4} f^2 f' [\cos (m' + 2m) + \cos (m' - 2m)] - 2ff'^2 [\cos (2m' + m) + \cos (2m' - m)] \\
& - \frac{5}{8} f^2 f'^2 [\cos (2m' + 2m) + \cos (2m' - 2m)] + \frac{3}{8} f^3 f' [\cos (m' + 3m) + \cos (m' - 3m)] \\
& - \frac{12}{8} ff'^3 [\cos (3m' + m) + \cos (3m' - m)],
\end{aligned}$$

$$\begin{aligned}
\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)^2 \left(1 - 3\frac{\Delta r'}{a'}\right)(\Delta l' - \Delta l) = & (f^2 f' + \frac{1}{2} f'^3) \sin m' - (ff'^2 + \frac{1}{2} f^3) \sin m + (\frac{25}{8} f^2 f'^2 + \frac{9}{8} f'^4) \sin 2m' \\
& + (\frac{11}{8} f^2 f'^2 + \frac{3}{8} f^4) \sin 2m + \frac{1}{2} f'^3 \sin 3m' - \frac{1}{2} f^3 \sin 3m \\
& + \frac{25}{16} f'^4 \sin 4m' - \frac{13}{16} f^4 \sin 4m - (\frac{17}{8} f^3 f' + \frac{19}{8} ff'^3) \sin (m' + m) \\
& + (\frac{9}{8} f^3 f' + \frac{9}{8} ff'^3) \sin (m' - m) + \frac{1}{2} f^2 f' [3 \sin (m' + 2m) - \sin (m' - 2m)] \\
& - \frac{1}{2} ff'^2 [3 \sin (2m' + m) + \sin (2m' - m)]
\end{aligned}$$

$$\begin{aligned}
& + \frac{1}{8} f^2 f'^2 [18 \sin (2m' + 2m) - 9 \sin (2m' - 2m)] \\
& + \frac{1}{8} f^3 f' [7 \sin (m' + 3m) + \sin (m' - 3m)] \\
& - \frac{1}{8} f f'^3 [31 \sin (3m' + m) + 11 \sin (3m' - m)],
\end{aligned}$$

$$\begin{aligned}
\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^3 (\Delta l' - \Delta l) = & - \left(\frac{3}{2} f^2 f'^2 + \frac{1}{4} f^4 \right) \sin 2m' - \left(\frac{3}{2} f^2 f'^2 + \frac{1}{2} f^4 \right) \sin 2m - \frac{1}{4} f'^4 \sin 4m' - \frac{1}{4} f^4 \sin 4m \\
& + \left(\frac{3}{2} f^3 f' + \frac{3}{2} f f'^3 \right) \sin (m' + m) - \frac{3}{2} f^2 f'^2 \sin (2m' + 2m) \\
& + \frac{1}{2} f^3 f' [2 \sin (m' + 3m) - \sin (m' - 3m)] + \frac{1}{2} f f'^3 [2 \sin (3m' + m) + \sin (3m' - m)].
\end{aligned}$$

(6). Если опредѣленные такимъ образомъ аргументы вставимъ въ общую формулу разложенія функціи S , то получимъ полное разложеніе этой функціи до членовъ четвертаго порядка относительно эксцентритетовъ. Для вѣковыхъ возмущеній имѣемъ надобность только въ тѣхъ членахъ, которые *явно* не зависятъ отъ времени, и при вычисленіи аргументовъ можно было бы не обращать вниманія на прочія члены; но я не пренебрегъ ими по слѣдующимъ причинамъ: Вопервыхъ, изъ полнаго вычисленія легко усмотрѣть, что въ разложеніи не пропущено ни одного члена и самое вычисленіе произведено безошибочно. Вовторыхъ, найденными членами можно благонадежно пользоваться при изслѣдованіяхъ возмущеній періодическихъ. Произведши упомянутую вставку, въ предположеніяхъ $i = \pm 1$ и ± 2 , и вспомнивъ, что $m = \zeta - \omega$, $m' = \zeta' - \omega'$, находимъ:

$$\begin{aligned}
S = & \frac{1}{2} A^{(0)} + \frac{1}{8} (f'^2 + f^2) \left(2a \frac{dA^{(0)}}{da} + a^2 \frac{d^2 A^{(0)}}{(da)^2} \right) + \frac{1}{4} f f' \cos (\omega' - \omega) \left[2A^{(1)} - 2a \frac{dA^{(1)}}{da} - a^2 \frac{d^2 A^{(1)}}{(da)^2} \right] \\
& + \frac{1}{32} f^2 f'^2 \left[4a \frac{dA^{(0)}}{da} + 14a^2 \frac{d^2 A^{(0)}}{(da)^2} + 8a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right] \\
& + \frac{1}{64} f^2 f'^2 \cos (2\omega' - 2\omega) \left[12A^{(2)} - 12a \frac{dA^{(2)}}{da} + 6a^2 \frac{d^2 A^{(2)}}{(da)^2} + 8a^3 \frac{d^3 A^{(2)}}{(da)^3} + a^4 \frac{d^4 A^{(2)}}{(da)^4} \right] \\
& - \frac{1}{32} f^3 f' \cos (\omega' - \omega) \left[4a^2 \frac{d^2 A^{(1)}}{(da)^2} + 6a^3 \frac{d^3 A^{(1)}}{(da)^3} + a^4 \frac{d^4 A^{(1)}}{(da)^4} \right] \\
& - \frac{1}{32} f f'^3 \cos (\omega' - \omega) \left[-4A^{(1)} + 4a \frac{dA^{(1)}}{da} + 22a^2 \frac{d^2 A^{(1)}}{(da)^2} + 10a^3 \frac{d^3 A^{(1)}}{(da)^3} + a^4 \frac{d^4 A^{(1)}}{(da)^4} \right] \\
& + \frac{1}{128} f^4 \left[24a \frac{dA^{(0)}}{da} + 36a^2 \frac{d^2 A^{(0)}}{(da)^2} + 12a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right] \\
& + \frac{1}{128} f^4 \left[4a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right].
\end{aligned}$$

(7). Второй членъ формулы (I) должно разлагать только до членовъ втораго порядка относительно эксцентритетовъ, потому что онъ помножается на функцію втораго порядка относительно наклоненій планетныхъ орбитъ, что производится также по общей формулѣ разложенія (чл. 2), и опять при помощи условныхъ уравненій:

*

$$\begin{aligned}
a' \frac{dB^{(i)}}{da'} &= -B^{(i)} - a \frac{dB^{(i)}}{da}, \\
aa' \frac{d^2 B^{(i)}}{da da'} &= -2a \frac{dB^{(i)}}{da} - a^2 \frac{d^2 B^{(i)}}{(da)^2}, \\
a'^2 \frac{d^2 B^{(i)}}{(da')^2} &= 2B^{(i)} + 4a \frac{dB^{(i)}}{da} + a^2 \frac{d^2 B^{(i)}}{(da)^2}, \\
a^2 a' \frac{d^3 B^{(i)}}{(da)^2 da'} &= -3a^2 \frac{d^2 B^{(i)}}{(da)^2} - a^3 \frac{d^3 B^{(i)}}{(da)^3}, \\
aa'^2 \frac{d^3 B^{(i)}}{da (da')^2} &= 6a \frac{dB^{(i)}}{da} + 6a^2 \frac{d^2 B^{(i)}}{(da)^2} + a^3 \frac{d^3 B^{(i)}}{(da)^3}, \\
a'^3 \frac{d^3 B^{(i)}}{(da')^3} &= -6B^{(i)} - 18a \frac{dB^{(i)}}{da} - 9a^2 \frac{d^2 B^{(i)}}{(da)^2} - a^3 \frac{d^3 B^{(i)}}{(da)^3}, \\
a^3 a' \frac{d^4 B^{(i)}}{(da)^3 da'} &= -4a^3 \frac{d^3 B^{(i)}}{(da)^3} - a^4 \frac{d^4 B^{(i)}}{(da)^4}, \\
aa'^3 \frac{d^4 B^{(i)}}{da (da')^3} &= -24a \frac{dB^{(i)}}{da} - 36a^2 \frac{d^2 B^{(i)}}{(da)^2} - 12a^3 \frac{d^3 B^{(i)}}{(da)^3} - a^4 \frac{d^4 B^{(i)}}{(da)^4}, \\
a^2 a'^2 \frac{d^4 B^{(i)}}{(da)^2 (da')^2} &= 12a^2 \frac{d^2 B^{(i)}}{(da)^2} + 8a^3 \frac{d^3 B^{(i)}}{(da)^3} + a^4 \frac{d^4 B^{(i)}}{(da)^4}, \\
a'^4 \frac{d^4 B^{(i)}}{(da')^4} &= 24B^{(i)} + 96a \frac{dB^{(i)}}{da} + 72a^2 \frac{d^2 B^{(i)}}{(da)^2} + 16a^3 \frac{d^3 B^{(i)}}{(da)^3} + a^4 \frac{d^4 B^{(i)}}{(da)^4}.
\end{aligned}$$

потому что надобно предположить

$$P = rr' \left[\frac{1}{r'^3} - (r'^2 + r^2 + 2rr' \cos \beta)^{-\frac{3}{2}} \right]$$

и

$$P' = aa' \left[\frac{1}{a'^3} - (a'^2 + a^2 - 2a'a \cos \beta)^{-\frac{3}{2}} \right] = \frac{1}{2} B^{(0)} + \frac{1}{2} B^{(i)} \cos i\beta,$$

изъ чего, по дифференцированіи относительно a и a' , нетрудно вывести, что

$$a' \frac{dB^{(0)}}{da'} = -B^{(0)} - a \frac{dB^{(0)}}{da}, \text{ и } a' \frac{dB^{(i)}}{da'} = -B^{(i)} - a \frac{dB^{(i)}}{da}.$$

Потомъ находимъ

$$\begin{aligned}
P &= \frac{1}{2} B^{(0)} \left[1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 - \left(\frac{\Delta r'}{a'} \right)^3 + \left(\frac{\Delta r'}{a'} \right)^4 \right] - \frac{1}{2} a \frac{dB^{(0)}}{da} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left(1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'} \right)^2 - 4 \left(\frac{\Delta r'}{a'} \right)^3 \right) \\
&+ \frac{1}{4} a^2 \frac{d^2 B^{(0)}}{(da)^2} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^2 \left(1 - 3 \frac{\Delta r'}{a'} + 6 \left(\frac{\Delta r'}{a'} \right)^2 \right) \\
&+ \cos i\beta \left\{ \frac{1}{2} B^{(i)} \left[1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 - \left(\frac{\Delta r'}{a'} \right)^3 + \left(\frac{\Delta r'}{a'} \right)^4 - \frac{i^2}{2} (\Delta l' - \Delta l)^2 \left(1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 \right) \right] \right. \\
&- \frac{1}{2} a \frac{dB^{(i)}}{da} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left[1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'} \right)^2 - 4 \left(\frac{\Delta r'}{a'} \right)^3 \right] \\
&\left. + \frac{1}{4} a^2 \frac{d^2 B^{(i)}}{(da)^2} \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^2 \left[1 - 3 \frac{\Delta r'}{a'} + 6 \left(\frac{\Delta r'}{a'} \right)^2 \right] \right\}
\end{aligned}$$

$$+ \sin i \beta \left\{ -\frac{i}{2} B^{(i)} (\Delta l' - \Delta l) \left(1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 - \left(\frac{\Delta r'}{a'} \right)^3 \right) \right. \\ \left. + \frac{i}{2} a \frac{dB^{(i)}}{da} (\Delta l' - \Delta l) \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left(1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'} \right)^2 \right) \right\},$$

гдѣ

$$1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 - \left(\frac{\Delta r'}{a'} \right)^3 + \left(\frac{\Delta r'}{a'} \right)^4 = 1 + f' \cos m' + f'^2 \cos 2m',$$

$$\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left(1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'} \right)^2 - 4 \left(\frac{\Delta r'}{a'} \right)^3 \right) = -\frac{1}{2} f'^2 - \frac{1}{2} f^2 - f' \cos m' + f \cos m - \frac{3}{2} f'^2 \cos 2m' \\ + \frac{1}{2} f^2 \cos 2m + ff' [\cos (m' + m) + \cos (m' - m)],$$

$$\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right)^2 \left(1 - 3 \frac{\Delta r'}{a'} + 6 \left(\frac{\Delta r'}{a'} \right)^2 \right) = \frac{1}{2} f'^2 + \frac{1}{2} f^2 + \frac{1}{2} f'^2 \cos 2m' + \frac{1}{2} f^2 \cos 2m \\ - ff' [\cos (m' + m) + \cos (m' - m)],$$

$$(\Delta l' - \Delta l)^2 \left(1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 \right) = 2f'^2 + 2f^2 - 2f'^2 \cos 2m' - 2f^2 \cos 2m \\ + 4ff' [\cos (m' + m) - \cos (m' - m)],$$

$$(\Delta l' - \Delta l) \left(1 - \frac{\Delta r'}{a'} + \left(\frac{\Delta r'}{a'} \right)^2 - \left(\frac{\Delta r'}{a'} \right)^3 \right) = 2f' \sin m' - 2f \sin m + \frac{9}{4} f'^2 \sin 2m' - \frac{5}{4} f^2 \sin 2m \\ - ff' [\sin (m' + m) - \sin (m' - m)],$$

$$(\Delta l' - \Delta l) \left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a} \right) \left(1 - 2 \frac{\Delta r'}{a'} + 3 \left(\frac{\Delta r'}{a'} \right)^2 \right) = -f'^2 \sin 2m' - f^2 \sin 2m + 2ff' \sin (m' + m).$$

И такъ

$$P = \frac{1}{2} B^{(0)} + \frac{1}{8} (f'^2 + f^2) \left(2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right) + \frac{1}{2} f' \cos (\zeta' - \omega') \left[B^{(0)} + a \frac{dB^{(0)}}{da} \right] - \frac{1}{2} f \cos (\zeta - \omega) a \frac{dB^{(0)}}{da} \\ + \frac{1}{8} f'^2 \cos (2\zeta' - 2\omega') \left[4B^{(0)} + 6a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] - \frac{1}{8} f^2 \cos (2\zeta - 2\omega) \left[2a \frac{dB^{(0)}}{da} - a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\ - \frac{1}{4} ff' [\cos (\zeta' + \zeta - \omega' - \omega) + \cos (\zeta' - \zeta - \omega' + \omega)] \left[2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\ + B^{(1)} \cos (\zeta' - \zeta) + \frac{1}{2} f' [\cos (2\zeta' - \zeta - \omega') + \cos (\zeta - \omega')] \left[B^{(1)} + a \frac{dB^{(1)}}{da} \right] \\ - \frac{1}{2} f [\cos (\zeta' - \omega) + \cos (\zeta' - 2\zeta + \omega)] a \frac{dB^{(1)}}{da} \\ + \frac{1}{4} (f'^2 + f^2) \cos (\zeta' - \zeta) \left[-4B^{(1)} + 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\ + \frac{1}{8} f'^2 [\cos (3\zeta' - \zeta - 2\omega') + \cos (\zeta' + \zeta - 2\omega')] \left[8B^{(1)} + 6a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\ + \frac{1}{8} f^2 [\cos (\zeta' + \zeta - 2\omega) + \cos (\zeta' - 3\zeta + 2\omega)] \left[4B^{(1)} - 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right]$$

$$\begin{aligned}
& -\frac{1}{4}ff' [\cos(2\zeta' - \omega' - \omega) + \cos(2\zeta - \omega' - \omega)] \left[4B^{(1)} + 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2B^{(1)}}{(da)^2} \right] \\
& -\frac{1}{4}ff' [\cos(2\zeta' - 2\zeta - \omega' + \omega) + \cos(\omega' - \omega)] \left[-4B^{(1)} + 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2B^{(1)}}{(da)^2} \right] \\
& -f' [\cos(\zeta - \omega') - \cos(2\zeta' - \zeta - \omega')] B^{(1)} + f [\cos(\zeta' - 2\zeta + \omega) - \cos(\zeta' - \omega)] B^{(1)} \\
& -\frac{1}{8}f'^2 [\cos(\zeta' + \zeta - 2\omega') - \cos(3\zeta' - \zeta - 2\omega')] \left[9B^{(1)} + 4a \frac{dB^{(1)}}{da} \right] \\
& +\frac{1}{8}f^2 [\cos(\zeta' - 3\zeta + 2\omega) - \cos(\zeta' + \zeta - 2\omega)] \left[5B^{(1)} - 4a \frac{dB^{(1)}}{da} \right] \\
& +\frac{1}{2}ff' [\cos(2\zeta - \omega' - \omega) - \cos(2\zeta' - \omega' - \omega)] \left[B^{(1)} + 2a \frac{dB^{(1)}}{da} \right] \\
& -\frac{1}{2}ff' [\cos(\omega' - \omega) - \cos(2\zeta' - 2\zeta - \omega' + \omega)] B^{(1)} \\
& +\cos(2\zeta' - 2\zeta) B^{(2)} + \frac{1}{2}f' [\cos(3\zeta' - 2\zeta - \omega') + \cos(\zeta' - 2\zeta + \omega')] \left[B^{(2)} + a \frac{dB^{(2)}}{da} \right] \\
& -\frac{1}{2}f [\cos(2\zeta' - \zeta - \omega) + \cos(2\zeta' - 3\zeta + \omega)] a \frac{dB^{(2)}}{da} \\
& +\frac{1}{4}(f'^2 + f^2) \cos(2\zeta' - 2\zeta) \left[-16B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2B^{(2)}}{(da)^2} \right] \\
& +\frac{1}{8}f'^2 [\cos(4\zeta' - 2\zeta - 2\omega') + \cos(2\zeta - 2\omega')] \left[20B^{(2)} + 6a \frac{dB^{(2)}}{da} + a^2 \frac{d^2B^{(2)}}{(da)^2} \right] \\
& +\frac{1}{8}f^2 [\cos(2\zeta' - 2\omega) + \cos(2\zeta' - 4\zeta + 2\omega)] \left[16B^{(2)} - 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2B^{(2)}}{(da)^2} \right] \\
& -\frac{1}{4}ff' [\cos(3\zeta' - \zeta - \omega' - \omega) + \cos(\zeta' - 3\zeta + \omega' + \omega)] \left[16B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2B^{(2)}}{(da)^2} \right] \\
& -\frac{1}{4}ff' [\cos(3\zeta' - 3\zeta - \omega' + \omega) + \cos(\zeta' - \zeta + \omega' - \omega)] \left[-16B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2B^{(2)}}{(da)^2} \right] \\
& -2f' [\cos(\zeta' - 2\zeta + \omega') - \cos(3\zeta' - 2\zeta - \omega')] B^{(2)} + 2f [\cos(2\zeta' - 3\zeta + \omega) - \cos(2\zeta' - \zeta + \omega)] B^{(2)} \\
& -\frac{1}{4}f'^2 [\cos(2\zeta - 2\omega') - \cos(4\zeta' - 2\zeta - 2\omega')] \left[9B^{(2)} + 4a \frac{dB^{(2)}}{da} \right] \\
& +\frac{1}{4}f^2 [\cos(2\zeta' - 4\zeta + 2\omega) - \cos(2\zeta' - 2\omega)] \left[5B^{(2)} - 4a \frac{dB^{(2)}}{da} \right] \\
& +ff' [\cos(\zeta' - 3\zeta + \omega' + \omega) - \cos(3\zeta' - \zeta - \omega' - \omega)] \left[B^{(2)} + 2a \frac{dB^{(2)}}{da} \right] \\
& -ff' [\cos(\zeta' - \zeta + \omega' - \omega) - \cos(3\zeta' - 3\zeta - \omega' + \omega)] B^{(2)}
\end{aligned}$$

(8). Поскольку h_2 есть функция ζ' и ζ , то надобно разложить ее также до членовъ второго порядка относительно эксцентритетовъ; получимъ:

$$\begin{aligned}
h_2 = & -(\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \cos(\zeta' - \zeta) + \sin^2 \frac{1}{2} J \cos(\zeta' + \zeta - 2N) + \sin^2 \frac{1}{2} J' \cos(\zeta' + \zeta - 2N') \\
& + \frac{1}{2} \sin J' \sin J [\cos(\zeta' - \zeta - N' + N) - \cos(\zeta' + \zeta - N' - N)] \\
& + f' (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) [\cos(\zeta - \omega') - \cos(2\zeta' - \zeta - \omega')] \\
& - f (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) [\cos(\zeta' - 2\zeta + \omega) - \cos(\zeta' - \omega)] \\
& + \frac{5}{8} f'^2 (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) [\cos(\zeta' + \zeta - 2\omega') - \cos(3\zeta' - \zeta - 2\omega')] \\
& - \frac{5}{8} f^2 (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) [\cos(\zeta' - 3\zeta + 2\omega) - \cos(\zeta' + \zeta - 2\omega)] \\
& - f' \sin^2 \frac{1}{2} J [\cos(\zeta + \omega' - 2N) - \cos(2\zeta' + \zeta - \omega' - 2N)] \\
& - f \sin^2 \frac{1}{2} J [\cos(\zeta' + \omega - 2N) - \cos(\zeta' + 2\zeta - \omega - 2N)] \\
& - \frac{5}{8} f'^2 \frac{1}{2} J [\cos(\zeta' - \zeta - 2\omega' + 2N) - \cos(3\zeta' + \zeta - 2\omega' - 2N)] \\
& - \frac{5}{8} f^2 \sin^2 \frac{1}{2} J [\cos(\zeta' - \zeta + 2\omega - 2N) - \cos(\zeta' + 3\zeta - 2\omega - 2N)] \\
& - f' \sin^2 \frac{1}{2} J' [\cos(\zeta + \omega' - 2N') - \cos(2\zeta' + \zeta - \omega' - 2N')] \\
& - f \sin^2 \frac{1}{2} J' [\cos(\zeta' + \omega - 2N') - \cos(\zeta' + 2\zeta - \omega - 2N')] \\
& - \frac{5}{8} f'^2 \sin^2 \frac{1}{2} J' [\cos(\zeta' - \zeta - 2\omega' + 2N') - \cos(3\zeta' + \zeta - 2\omega' - 2N')] \\
& - \frac{5}{8} f^2 \sin^2 \frac{1}{2} J' [\cos(\zeta' - \zeta + 2\omega - 2N') - \cos(\zeta' + 3\zeta - 2\omega - 2N')] \\
& - \frac{1}{2} f' \sin J' \sin J [\cos(\zeta - \omega' + N' - N) - \cos(2\zeta - \zeta - \omega' - N' + N)] \\
& + \frac{1}{2} f \sin J' \sin J [\cos(\zeta' - 2\zeta + \omega - N' + N) - \cos(\zeta' - \omega - N' + N)] \\
& - \frac{5}{16} f'^2 \sin J' \sin J [\cos(\zeta' + \zeta - 2\omega' + N' - N) - \cos(3\zeta' - \zeta - 2\omega' - N' + N)] \\
& + \frac{5}{16} f^2 \sin J' \sin J [\cos(\zeta' - 3\zeta + 2\omega - N' + N) - \cos(\zeta' + \zeta - 2\omega - N' + N)] \\
& + \frac{1}{2} f' \sin J' \sin J [\cos(\zeta + \omega' - N' - N) - \cos(2\zeta' + \zeta - \omega' - N' - N)] \\
& + \frac{1}{2} f \sin J' \sin J [\cos(\zeta' + \omega - N' - N) - \cos(\zeta' + 2\zeta - \omega - N' - N)] \\
& + \frac{5}{16} f'^2 \sin J' \sin J [\cos(\zeta' - \zeta - 2\omega' + N' + N) - \cos(3\zeta' + \zeta - 2\omega' - N' - N)] \\
& + \frac{5}{16} f^2 \sin J' \sin J [\cos(\zeta' - \zeta + 2\omega - N' - N) - \cos(\zeta' + 3\zeta - 2\omega - N' - N)] \\
& + (f'^2 + f^2) (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \cos(\zeta' - \zeta) \\
& - \frac{1}{2} f'^2 \sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J [\cos(\zeta' + \zeta - 2\omega') + \cos(3\zeta' - \zeta - 2\omega')] \\
& - \frac{1}{2} f^2 (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) [\cos(\zeta' - 3\zeta + 2\omega) + \cos(\zeta' + \zeta - 2\omega)] \\
& + f f' (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) [\cos(2\zeta - \omega' - \omega) + \cos(2\zeta' - \omega' - \omega) - \cos(\omega' - \omega) - \cos(2\zeta' - 2\zeta - \omega' + \omega)] \\
& - (f'^2 + f^2) \sin^2 \frac{1}{2} J \cos(\zeta' + \zeta - 2N) \\
& + \frac{1}{2} f'^2 \sin^2 \frac{1}{2} J [\cos(3\zeta' + \zeta - 2\omega' - 2N) + \cos(\zeta' - \zeta - 2\omega' + 2N)]
\end{aligned}$$

$$\begin{aligned}
& + \frac{1}{2} f'^2 \sin^2 \frac{1}{2} J [\cos(\zeta' + 3\zeta - 2\omega - 2N) + \cos(\zeta' - \zeta + 2\omega - 2N)] \\
& \quad + ff' \sin^2 \frac{1}{2} J [\cos(2\zeta' + 2\zeta - \omega' - \omega - 2N) + \cos(\omega' + \omega - 2N) \\
& \quad - \cos(2\zeta' - \omega' + \omega - 2N) - \cos(2\zeta + \omega' - \omega - 2N)] \\
& - (f'^2 + f^2) \sin^2 \frac{1}{2} J' \cos(\zeta' + \zeta - 2N') \\
& \quad + \frac{1}{2} f'^2 \sin^2 \frac{1}{2} J' [\cos(3\zeta' + \zeta - 2\omega' - 2N') + \cos(\zeta' - \zeta - 2\omega' + 2N')] \\
& + \frac{1}{2} f'^2 \sin^2 \frac{1}{2} J' [\cos(\zeta' + 3\zeta - 2\omega - 2N') + \cos(\zeta' - \zeta + 2\omega - 2N')] \\
& \quad + ff' \sin^2 \frac{1}{2} J' [\cos(2\zeta' + 2\zeta - \omega' - \omega - 2N') + \cos(\omega' + \omega - 2N') \\
& \quad - \cos(2\zeta' - \omega' + \omega - 2N') - \cos(2\zeta + \omega' - \omega - 2N')] \\
& - \frac{1}{2} (f'^2 + f^2) \sin J' \sin J \cos(\zeta' - \zeta - N' + N) \\
& \quad + \frac{1}{4} f'^2 \sin J' \sin J [\cos(3\zeta' - \zeta - 2\omega' - N' + N) + \cos(\zeta' + \zeta - 2\omega' + N' - N)] \\
& + \frac{1}{4} f'^2 \sin J' \sin J [\cos(\zeta' + \zeta - 2\omega - N' + N) + \cos(\zeta' - 3\zeta + 2\omega - N' + N)] \\
& \quad - \frac{1}{2} ff' \sin J' \sin J [\cos(2\zeta' - \omega' - \omega - N' + N) + \cos(2\zeta - \omega' - \omega + N' - N) \\
& \quad - \cos(2\zeta' - 2\zeta - \omega' + \omega - N' + N) - \cos(\omega' - \omega - N' + N)] \\
& + \frac{1}{2} (f'^2 + f^2) \sin J' \sin J \cos(\zeta' + \zeta - N' - N) \\
& \quad - \frac{1}{4} f'^2 \sin J' \sin J [\cos(3\zeta' + \zeta - 2\omega' - N' - N) + \cos(\zeta' - \zeta - 2\omega' + N' + N)] \\
& - \frac{1}{4} f'^2 \sin J' \sin J [\cos(\zeta' + 3\zeta - 2\omega - N' - N) + \cos(\zeta' - \zeta + 2\omega - N' - N)] \\
& \quad - \frac{1}{2} ff' \sin J' \sin J [\cos(2\zeta' + 2\zeta - \omega' - \omega - N' - N) + \cos(\omega' + \omega - N' - N) \\
& \quad - \cos(2\zeta' - \omega' + \omega - N' - N) - \cos(2\zeta + \omega' - \omega - N' - N)].
\end{aligned}$$

(9). Произведение этихъ двухъ выражений будетъ

$$\begin{aligned}
Ph_2 = & \frac{1}{8} ff' \cos(\omega' - \omega) (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \left[2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\
& - \frac{1}{8} ff' \cos(\omega' + \omega - 2N) \sin^2 \frac{1}{2} J \left[2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\
& - \frac{1}{8} ff' \cos(\omega' + \omega - 2N') \sin^2 \frac{1}{2} J' \left[2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\
& - \frac{1}{16} ff' \cos(\omega' - \omega - N' + N) \sin J' \sin J \left[2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\
& + \frac{1}{16} ff' \cos(\omega' + \omega - N' - N) \sin J' \sin J \left[2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\
& - \frac{1}{2} (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) B^{(1)} + \frac{1}{4} \sin J' \sin J \cos(N' - N) B^{(1)} \\
& - \frac{1}{8} (f'^2 + f^2) (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \left[2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right]
\end{aligned}$$

$$\begin{aligned}
& + \frac{1}{16} (f'^2 + f^2) \sin J' \sin J \cos (N' - N) \left[2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& + \frac{1}{16} f'^2 \sin^2 \frac{1}{2} J \cos (2\omega' - 2N) \left[2B^{(1)} - 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& + \frac{1}{16} f^2 \sin^2 \frac{1}{2} J \cos (2\omega - 2N) \left[6B^{(1)} + 6a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& + \frac{1}{16} f'^2 \sin^2 \frac{1}{2} J' \cos (2\omega' - 2N') \left[2B^{(1)} - 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& + \frac{1}{16} f^2 \sin^2 \frac{1}{2} J' \cos (2\omega - 2N') \left[6B^{(1)} + 6a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& - \frac{1}{32} f'^2 \sin J' \sin J \cos (2\omega' - N' - N) \left[2B^{(1)} - 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& - \frac{1}{32} f^2 \sin J' \sin J \cos (2\omega - N' - N) \left[6B^{(1)} + 6a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& + \frac{1}{8} f f' (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \cos (\omega' - \omega) \left[-2B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2 B^{(2)}}{(da)^2} \right] \\
& - \frac{1}{16} f f' \sin J' \sin J \cos (\omega' - \omega + N' - N) \left[-2B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2 B^{(2)}}{(da)^2} \right]
\end{aligned}$$

(10). Третій членъ общаго разложенія (I) функціи R помножается на h_4 , на функцію четвертаго порядка относительно наклоненій; слѣд. надобно принять

$$h_4 = \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J [\cos(\zeta' - \zeta) + \cos(\zeta' - \zeta - 2N' + 2N) - \cos(\zeta' + \zeta - 2N) - \cos(\zeta' + \zeta - 2N')],$$

и къ произведенію Ph_2 придать еще два члена:

$$\frac{1}{2} \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J \cdot B^{(1)} + \frac{1}{2} \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J \cos (2N' - 2N) \cdot B^{(1)}.$$

(11). Въ четвертомъ членѣ формулы (I)

$$\begin{aligned}
h_2^2 = & \sin^4 \frac{1}{2} J' + \sin^4 \frac{1}{2} J + 5 \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J + \frac{1}{2} (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J)^2 \cos (2\zeta' - 2\zeta) \\
& - (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \sin^2 \frac{1}{2} J [\cos (2\zeta' - 2N) + \cos (2\zeta - 2N)] \\
& - (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \sin^2 \frac{1}{2} J' [\cos (2\zeta' - 2N') + \cos (2\zeta - 2N')] \\
& - 2 (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \sin \frac{1}{2} J' \sin \frac{1}{2} J [\cos (2\zeta' - 2\zeta - N' + N) + \cos (N' - N) \\
& \quad - \cos (2\zeta' - N' - N) - \cos (2\zeta - N' - N)] \\
& + \frac{1}{2} \sin^4 \frac{1}{2} J \cos (2\zeta' + 2\zeta - 4N) + \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J [\cos (2\zeta' + 2\zeta - 2N - 2N') + \cos (2N' - 2N)] \\
& + 2 \sin \frac{1}{2} J' \sin^3 \frac{1}{2} J [\cos (2\zeta' - N' - N) + \cos (2\zeta + N' - 3N) - \cos (2\zeta' + 2\zeta - N' - 3N) - \cos (N' - N)] \\
& + \frac{1}{2} \sin^4 \frac{1}{2} J' \cos (2\zeta' + 2\zeta - 4N') + 2 \sin^3 \frac{1}{2} J' \sin \frac{1}{2} J [\cos (2\zeta' - 3N' + N) + \cos (2\zeta - N' - N) \\
& \quad - \cos (2\zeta' + 2\zeta - 3N' - N) - \cos (N' - N)] \\
& + 2 \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J [\cos (2\zeta' - 2\zeta - 2N' + 2N) - \cos (2\zeta' + 2\zeta - 2N' - 2N) - 2 \cos (2\zeta' - 2N') - 2 \cos (2\zeta - 2N)].
\end{aligned}$$

Произведение $\sin J' \sin J = 4 \sin \frac{1}{2} J' \sin \frac{1}{2} J - 2 \sin^3 \frac{1}{2} J' \sin \frac{1}{2} J - 2 \sin \frac{1}{2} J' \sin^3 \frac{1}{2} J$, и положивъ

$$Q' = -\frac{3}{2} a^2 a'^2 [a'^2 + a^2 - 2aa' \cos \beta]^{-\frac{5}{2}} = -\frac{3}{4} C^{(0)} - \frac{3}{4} C^{(1)} \cos i\beta,$$

найдемъ

$$Q = -\frac{3}{4} C^{(0)} - \frac{3}{2} \cos(\zeta' - \zeta) C^{(1)} - \frac{3}{2} \cos(2\zeta' - 2\zeta) C^{(2)};$$

слѣд.

$$\begin{aligned} Qh^2_2 = & \frac{1}{8} (\sin^4 \frac{1}{2} J' + \sin^4 \frac{1}{2} J) [6C^{(0)} + 3C^{(2)}] - \frac{1}{4} \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J [15C^{(0)} + 3C^{(2)}] \\ & - \frac{1}{4} \sin^2 \frac{1}{2} J' \sin \frac{1}{2} J \cos(2N' - 2N) [3C^{(0)} + 6C^{(2)}] \\ & + \frac{1}{2} \sin \frac{1}{2} J' \sin \frac{1}{2} J (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \cos(N' - N) [6C^{(0)} - 3C^{(2)}]. \end{aligned}$$

(12). И такъ, наконецъ, функція возмущеній R , разложенная до членовъ четвертаго порядка относительно эксцентритетовъ и наклоненій, для вѣковыхъ возмущеній будетъ:

$$\begin{aligned} \frac{R}{m'} = & \frac{1}{2} A^{(0)} + \frac{1}{8} (f'^2 + f^2) \left[2a \frac{dA^{(0)}}{da} + a^2 \frac{d^2 A^{(0)}}{(da)^2} \right] + \frac{1}{32} f^2 f'^2 \left[4a \frac{dA^{(0)}}{da} + 14a^2 \frac{d^2 A^{(0)}}{(da)^2} + 8a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right] \\ & + \frac{1}{128} f'^4 \left[24a \frac{dA^{(0)}}{da} + 36a^2 \frac{d^2 A^{(0)}}{(da)^2} + 12a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right] + \frac{1}{128} f^4 \left[4a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right] \\ & + \frac{1}{4} f f' \cos(\omega' - \omega) \left[2A^{(1)} - 2a \frac{dA^{(1)}}{da} - a^2 \frac{d^2 A^{(1)}}{(da)^2} \right] - \frac{1}{32} f^3 f' \cos(\omega' - \omega) \left[4a^2 \frac{d^2 A^{(1)}}{(da)^2} + 6a^3 \frac{d^3 A^{(1)}}{(da)^3} + a^4 \frac{d^4 A^{(1)}}{(da)^4} \right] \\ & - \frac{1}{32} f f'^3 \cos(\omega' - \omega) \left[-4A^{(1)} + 4a \frac{dA^{(1)}}{da} + 22a^2 \frac{d^2 A^{(1)}}{(da)^2} + 10a^3 \frac{d^3 A^{(1)}}{(da)^3} + a^4 \frac{d^4 A^{(1)}}{(da)^4} \right] \\ & + \frac{1}{64} f^2 f'^2 \cos(2\omega' - 2\omega) \left[12A^{(2)} - 12a \frac{dA^{(2)}}{da} + 6a^2 \frac{d^2 A^{(2)}}{(da)^2} + 8a^3 \frac{d^3 A^{(2)}}{(da)^3} + a^4 \frac{d^4 A^{(2)}}{(da)^4} \right] \\ & + \frac{1}{2} f f' \{ (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \cos(\omega' - \omega) - \sin^2 \frac{1}{2} J \cos(\omega' + \omega - 2N) - \sin^2 \frac{1}{2} J' \cos(\omega' + \omega - 2N') \\ & \quad - 2 \sin \frac{1}{2} J' \sin \frac{1}{2} J \cos(\omega' - \omega - N' + N) \\ & \quad + 2 \sin \frac{1}{2} J' \sin \frac{1}{2} J \cos(\omega' + \omega - N' - N) \} \left[2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\ & - \frac{1}{2} [\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J - \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J] B^{(1)} + \frac{1}{4} [\sin J' \sin J \cos(N' - N) + 2 \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J \cos(2N' - 2N)] B^{(1)} \\ & - \frac{1}{8} (f'^2 + f^2) [\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J - 2 \sin \frac{1}{2} J' \sin \frac{1}{2} J \cos(N' - N)] \left[2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\ & + \frac{1}{16} f'^2 [\sin^2 \frac{1}{2} J \cos(2\omega' - 2N) + \sin^2 \frac{1}{2} J' \cos(2\omega' - 2N')] \\ & - 2 \sin \frac{1}{2} J' \sin \frac{1}{2} J \cos(2\omega' - N' - N) \left[2B^{(1)} - 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\ & + \frac{1}{16} f^2 [\sin^2 \frac{1}{2} J \cos(2\omega - 2N) + \sin^2 \frac{1}{2} J' \cos(2\omega - 2N')] \\ & - 2 \sin \frac{1}{2} J' \sin \frac{1}{2} J \cos(2\omega - N' - N) \left[6B^{(1)} + 6a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \end{aligned}$$

$$\begin{aligned}
& + \frac{1}{8} f f' [(\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \cos(\omega' - \omega) - 2 \sin \frac{1}{2} J' \sin \frac{1}{2} J \cos(\omega' - \omega + N' - N)] \left[-2 B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2 B^{(2)}}{(da)^2} \right] \\
& - \frac{1}{8} (\sin^4 \frac{1}{2} J' + \sin^4 \frac{1}{2} J) [6 C^{(0)} + 3 C^{(2)}] - \frac{1}{4} \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J [15 C^{(0)} + 3 C^{(2)}] \\
& - \frac{1}{4} \sin^2 \frac{1}{2} J' \sin^2 \frac{1}{2} J \cos(2N' - 2N) [3 C^{(0)} + 6 C^{(2)}] + \frac{1}{2} \sin \frac{1}{2} J' \sin \frac{1}{2} J (\sin^2 \frac{1}{2} J' + \sin^2 \frac{1}{2} J) \cos(N' - N) [6 C^{(0)} + 3 C^{(2)}].
\end{aligned}$$

(13). Для удобства дифференцирования, этому выраженію надобно дать другой видъ посредствомъ условій:

$$h = f \sin \omega, \quad h' = f' \sin \omega', \quad p = \tan J \sin N, \quad p' = \tan J' \sin N', \quad \text{и пр.}$$

$$l = f \cos \omega, \quad l' = f' \cos \omega', \quad q = \tan J \cos N, \quad q' = \tan J' \cos N', \quad \text{и пр.}$$

и посредствомъ превращенія синусовъ наклоненій въ тангенсы тѣхъ же угловъ: именно: извѣстно, что

$$\sin J = \frac{\tan J}{\sqrt{1 + \tan^2 J}} = \tan J (1 - \frac{1}{2} \tan^2 J),$$

слѣд.

$$\sin J' \sin J = \tan J' \tan J (1 - \frac{1}{2} \tan^2 J' - \frac{1}{2} \tan^2 J).$$

Потомъ

$$\cos J = (1 + \tan^2 J)^{-\frac{1}{2}} = 1 - \frac{1}{2} \tan^2 J + \frac{3}{8} \tan^4 J,$$

что, вставивъ въ

$$\sin^2 \frac{1}{2} J = \frac{1}{2} - \frac{1}{2} \cos J,$$

получимъ

$$\sin^2 \frac{1}{2} J = \frac{1}{4} \tan^2 J - \frac{3}{16} \tan^4 J.$$

Послѣ того найдемъ

$$\begin{aligned}
\frac{R}{m'} &= \frac{1}{2} A^{(0)} + \frac{1}{8} (l'^2 + h'^2 + l^2 + h^2) \left[2a \frac{dA^{(0)}}{da} + a^2 \frac{d^2 A^{(0)}}{(da)^2} \right] \\
&+ \frac{1}{32} (l'^2 + h'^2) (l'^2 + h'^2) \left[4a \frac{dA^{(0)}}{da} + 14a^2 \frac{d^2 A^{(0)}}{(da)^2} + 8a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right] \\
&+ \frac{1}{128} (l'^2 + h'^2)^2 \left[24a \frac{dA^{(0)}}{da} + 36a^2 \frac{d^2 A^{(0)}}{(da)^2} + 12a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right] \\
&+ \frac{1}{128} (l'^2 + h'^2)^2 \left[4a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} \right] \\
&+ \frac{1}{4} (l'l + h'h) \left[2A^{(1)} - 2a \frac{dA^{(1)}}{da} - a^2 \frac{d^2 A^{(1)}}{(da)^2} \right] \\
&- \frac{1}{32} (l'^2 + h'^2) (l'l + h'h') \left[4a^2 \frac{d^2 A^{(0)}}{(da)^2} + 6a^3 \frac{d^3 A^{(1)}}{(da)^3} + a^4 \frac{d^4 A^{(1)}}{(da)^4} \right] \\
&- \frac{1}{32} (l'^2 + h'^2) (l'l + h'h') \left[-4A^{(1)} + 4a \frac{dA^{(1)}}{da} + 22a^2 \frac{d^2 A^{(1)}}{(da)^2} + 10a^3 \frac{d^3 A^{(1)}}{(da)^3} + a^4 \frac{d^4 A^{(1)}}{(da)^4} \right] \\
&+ \frac{1}{64} [(l'^2 - h'^2)(l^2 - h^2) + 4l'l'h'h'] \left[12A^{(2)} - 12a \frac{dA^{(2)}}{da} + 6a^2 \frac{d^2 A^{(2)}}{(da)^2} + 8a^3 \frac{d^3 A^{(2)}}{(da)^3} + a^4 \frac{d^4 A^{(2)}}{(da)^4} \right]
\end{aligned}$$

*

$$\begin{aligned}
& + \frac{1}{16} [l'(p'-p)^2 + hh'(q'-q)^2 - lh'(q'(p'-p) - p(q'-q)) - l'h(p'(q'-q) - q(p'-p))] \left[2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} \right] \\
& - \frac{1}{32} \{ 4[(q'-q)^2 + (p'-p)^2] + 4[(q'-q)^2 + (p'-p)^2](qq' + pp') - 3[q'^2 - q^2 + (p'^2 - p^2)^2] - 6[q'p' - qp]^2 \} B^{(1)} \\
& - \frac{1}{32} (l'^2 + h'^2 + l^2 + h^2) [(q' - q)^2 + (p' - p)^2] \left[2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& + \frac{1}{64} \{ (l'^2 - h'^2) [(q' - q)^2 - (p' - p)^2] + 4l'h'(p' - p)(q' - q) \} \left[2B^{(1)} - 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& + \frac{1}{64} \{ (l^2 - h^2) [(q' - q)^2 - (p' - p)^2] + 4lh(p' - p)(q' - q) \} \left[6B^{(1)} + 6a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} \right] \\
& + \frac{1}{32} \{ (l'l' + hh') [(q' - q)^2 + (p' - p)^2] + 2(lh' - l'h)(qp' - q'p) \} \left[-2B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2 B^{(2)}}{(da)^2} \right] \\
& - \frac{3}{64} \{ (q'^2 - q^2)^2 + (p'^2 - p^2)^2 - 4[(q' - q)^2 + (p' - p)^2](qq' + pp') + 4(p'q - pq')^2 - 2(q'p' - qp)^2 \} C^{(0)} \\
& - \frac{3}{128} \{ (q'^2 - q^2)^2 + (p'^2 - p^2)^2 - 4[(q' - q)^2 + (p' - p)^2](qq' + pp') + 2(p'^2 - p^2)(q'^2 - q^2) \} C^{(2)}.
\end{aligned}$$

(14). Изъ предположенныхъ величинъ h, l, p, q выходить:

$$\begin{aligned}
dh &= l d\omega + \sin \omega df, \quad dl = -h d\omega + \cos \omega df, \\
dp &= q dN + \frac{\sin N}{\cos^2 J} dJ, \quad dq = -p dN + \frac{\cos N}{\cos^2 J} dJ,
\end{aligned}$$

и какъ

$$\frac{dR}{df} df + \frac{dR}{dJ} dJ + \frac{dR}{dN} dN + \frac{dR}{d\omega} d\omega = \frac{dR}{dh} dh + \frac{dR}{dl} dl + \frac{dR}{dp} dp + \frac{dR}{dq} dq;$$

то

$$\frac{dR}{df} = \frac{dR}{dh} \sin \omega + \frac{dR}{dl} \cos \omega, \quad \frac{dR}{d\omega} = l \frac{dR}{dh} - h \frac{dR}{dl},$$

$$\frac{dR}{dJ} = \frac{dR}{dp} \frac{\sin N}{\cos^2 J} + \frac{dR}{dq} \frac{\cos N}{\cos^2 J}, \quad \frac{dR}{dN} = q \frac{dR}{dp} - p \frac{dR}{dq}.$$

Сверхъ того, въ третьемъ отдѣленіи доказано, что

$$da = 2a^2 n \frac{dR}{dE} dt, \quad d\omega = \frac{an\sqrt{1-f^2}}{f} \cdot \frac{dR}{df} dt,$$

$$df = -\frac{an\sqrt{1-f^2}}{f} [1 - \sqrt{1-f^2}] \frac{dR}{dE} dt - \frac{an\sqrt{1-f^2}}{f} \cdot \frac{dR}{d\omega} dt,$$

$$dN = \frac{na}{\sin J \sqrt{1-f^2}} \cdot \frac{dR}{dJ} dt, \quad dJ = -\frac{na}{\sin J \sqrt{1-f^2}} \cdot \frac{dR}{dN} dt,$$

и въ вѣковыхъ возмущеніяхъ $\frac{dR}{dE} = 0$; слѣд. если въ выраженія $\frac{df}{dt}$ и $\frac{d\omega}{dt}$ вставимъ выше-найденныя величины $\frac{dR}{d\omega}$ и $\frac{dR}{df}$, то получимъ

$$\frac{df}{dt} = -\frac{an\sqrt{1-f^2}}{f} l \frac{dR}{dh} + \frac{an\sqrt{1-f^2}}{f} h \frac{dR}{dl},$$

$$\frac{d\omega}{dt} = \frac{an\sqrt{1-f^2}}{f} \sin \omega \frac{dR}{dh} + \frac{an\sqrt{1-f^2}}{f} \cos \omega \frac{dR}{dl},$$

и потому

$$\begin{aligned} \frac{dh}{dt} = & \frac{an\sqrt{1-f^2}}{f} l \sin \omega \frac{dR}{dh} + \frac{an\sqrt{1-f^2}}{f} l \cos \omega \frac{dR}{dl} \\ & - \frac{an\sqrt{1-f^2}}{f} l \sin \omega \frac{dR}{dh} + \frac{an\sqrt{1-f^2}}{f} h \sin \omega \frac{dR}{dl}, \end{aligned}$$

или

$$\frac{dh}{dt} = an \frac{dR}{dl} - \frac{1}{2} an (h^2 + l^2) \frac{dR}{dl}.$$

Такимъ же образомъ находимъ:

$$\begin{aligned} \frac{dl}{dt} = & - \left[an \frac{dR}{dh} - \frac{1}{2} an (l^2 + h^2) \frac{dR}{dh} \right], \\ \frac{dp}{dt} = & na \frac{dR}{dq} + \frac{1}{2} na (l^2 + h^2) \frac{dR}{dq} + \frac{3}{2} na (p^2 + q^2) \frac{dR}{dq}, \\ \frac{dq}{dt} = & - \left[na \frac{dR}{dp} + \frac{1}{2} na (l^2 + h^2) \frac{dR}{dp} + \frac{3}{2} na (p^2 + q^2) \frac{dR}{dp} \right]. \end{aligned}$$

(15). Въ выраженіи $\frac{R}{m'}$ слѣдуетъ преобразовать коэффициенты, составленные изъ количествъ A, B, C и изъ ихъ дифференціаловъ. Въ первомъ отдѣленіи положено $\alpha = \frac{a}{a'}$, и найдено:

$$\begin{aligned} A^{(0)} = & -\frac{1}{a'} b_{\frac{1}{2}}^{(0)}, \quad A^{(1)} = \frac{a'}{\alpha} - \frac{1}{a'} b_{\frac{1}{2}}^{(1)}, \quad A^{(i)} = \frac{1}{a'} b_{\frac{1}{2}}^{(i)}, \\ \frac{dA^{(0)}}{da} = & -\frac{1}{a'^2} \cdot \frac{db_{\frac{1}{2}}^{(0)}}{d\alpha}, \quad \frac{d^n A^{(0)}}{(da)^n} = -\frac{1}{(a')^{n+1}} \cdot \frac{d^n b_{\frac{1}{2}}^{(0)}}{(d\alpha)^n}, \\ \frac{dA^{(1)}}{da} = & \frac{1}{a'^2} - \frac{1}{a'^2} \cdot \frac{db_{\frac{1}{2}}^{(1)}}{d\alpha}, \quad \frac{d^n A^{(i)}}{(da)^n} = -\frac{1}{(a')^{n+1}} \cdot \frac{d^n b_{\frac{1}{2}}^{(i)}}{(d\alpha)^n}; \end{aligned}$$

слѣд. получимъ

$$\begin{aligned} 2a \frac{dA^{(0)}}{da} + a^2 \frac{d^2 A^{(0)}}{(da)^2} = & -\frac{1}{a'} \left(2\alpha \frac{db_{\frac{1}{2}}^{(0)}}{d\alpha} + \alpha^2 \frac{d^2 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^2} \right), \\ 4a \frac{dA^{(0)}}{da} + 14a^2 \frac{d^2 A^{(0)}}{(da)^2} + 8a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} = & -\frac{1}{a'} \left(4\alpha \frac{db_{\frac{1}{2}}^{(0)}}{d\alpha} + 14\alpha^2 \frac{d^2 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^2} + 8\alpha^3 \frac{d^3 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^3} + \alpha^4 \frac{d^4 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^4} \right), \\ 24a \frac{dA^{(0)}}{da} + 36a^2 \frac{d^2 A^{(0)}}{(da)^2} + 12a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} = & -\frac{1}{a'} \left(24\alpha \frac{db_{\frac{1}{2}}^{(0)}}{d\alpha} + 36\alpha^2 \frac{d^2 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^2} + 12\alpha^3 \frac{d^3 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^3} + \alpha^4 \frac{d^4 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^4} \right), \\ 4a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} = & -\frac{1}{a'} \left(4\alpha^3 \frac{d^3 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^3} + \alpha^4 \frac{d^4 b_{\frac{1}{2}}^{(0)}}{(d\alpha)^4} \right), \\ 2A^{(0)} - 2a \frac{dA^{(1)}}{da} - a^2 \frac{d^2 A^{(1)}}{(da)^2} = & -\frac{1}{a'} \left(2b_{\frac{1}{2}}^{(1)} - 2\alpha \frac{db_{\frac{1}{2}}^{(1)}}{d\alpha} - \alpha^2 \frac{d^2 b_{\frac{1}{2}}^{(1)}}{(d\alpha)^2} \right), \end{aligned}$$

$$-4A^{(1)} + 4a \frac{dA^{(1)}}{da} + 22a^2 \frac{d^2A^{(1)}}{(da)^2} + 10a^3 \frac{d^3A^{(1)}}{(da)^3} + a^4 \frac{d^4A^{(1)}}{(da)^4} = \frac{1}{a'} \left(4b_{\frac{1}{2}}^{(1)} - 4\alpha \frac{db_{\frac{1}{2}}^{(1)}}{d\alpha} - 22\alpha^2 \frac{d^2b_{\frac{1}{2}}^{(1)}}{(d\alpha)^2} - 10\alpha^3 \frac{d^3b_{\frac{1}{2}}^{(1)}}{(d\alpha)^3} - \alpha^4 \frac{d^4b_{\frac{1}{2}}^{(1)}}{(d\alpha)^4} \right),$$

$$4a^2 \frac{d^2A^{(1)}}{(da)^2} + 6a^3 \frac{d^3A^{(1)}}{(da)^3} + a^4 \frac{d^4A^{(1)}}{(da)^4} = -\frac{1}{a'} \left(4\alpha^2 \frac{d^2b_{\frac{1}{2}}^{(1)}}{(d\alpha)^2} + 6\alpha^3 \frac{d^3b_{\frac{1}{2}}^{(1)}}{(d\alpha)^3} + \alpha^4 \frac{d^4b_{\frac{1}{2}}^{(1)}}{(d\alpha)^4} \right),$$

$$12A^{(2)} - 12a \frac{dA^{(2)}}{da} + 6a^2 \frac{d^2A^{(2)}}{(da)^2} + 8a^3 \frac{d^3A^{(2)}}{(da)^3} + a^4 \frac{d^4A^{(2)}}{(da)^4} = -\frac{1}{a'} \left(12b_{\frac{1}{2}}^{(2)} - 12\alpha \frac{db_{\frac{1}{2}}^{(2)}}{d\alpha} + 6\alpha^2 \frac{d^2b_{\frac{1}{2}}^{(2)}}{(d\alpha)^2} + 8\alpha^3 \frac{d^3b_{\frac{1}{2}}^{(2)}}{(d\alpha)^3} + \alpha^4 \frac{d^4b_{\frac{1}{2}}^{(2)}}{(d\alpha)^4} \right).$$

Также въ отдѣленіи I (стр. 15) найдено:

$$b_{\frac{3}{2}}^{(0)} = \frac{1}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)}, \quad b_{\frac{3}{2}}^{(1)} = -\frac{3}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)}, \quad b_{\frac{3}{2}}^{(2)} = -\frac{6(1+\alpha^2)}{\alpha(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} - \frac{3\alpha}{\alpha(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)},$$

предположеніе же

$$\frac{a}{a'^2} - aa'(a'^2 + a^2 - 2aa' \cos \beta)^{-\frac{3}{2}} = \frac{a}{a'^2} - \frac{a}{a'^2} (1 + \alpha^2 - 2\alpha \cos \beta)^{-\frac{3}{2}} = \frac{1}{2} B^{(1)} + B^{(1)} \cos \beta + B^{(2)} \cos 2\beta + \dots$$

гдѣ (Отд. I, стр. 13)

$$(1 + \alpha^2 - 2\alpha \cos \beta)^{-\frac{3}{2}} = \frac{1}{2} b_{\frac{3}{2}}^{(0)} + b_{\frac{3}{2}}^{(1)} \cos \beta + b_{\frac{3}{2}}^{(2)} \cos 2\beta + \dots$$

дастъ

$$B^{(0)} = \frac{\alpha}{a'} (2 - b_{\frac{3}{2}}^{(0)}), \quad B^{(1)} = -\frac{\alpha}{a'} b_{\frac{3}{2}}^{(1)}, \quad B^{(2)} = -\frac{\alpha}{a'} b_{\frac{3}{2}}^{(2)};$$

отсюда:

$$\frac{dB^{(0)}}{da} = -\frac{1}{a'^2} \left(-2 + b_{\frac{3}{2}}^{(0)} + \alpha \frac{db_{\frac{3}{2}}^{(0)}}{d\alpha} \right), \quad \frac{d^2B^{(0)}}{(da)^2} = -\frac{1}{a'^3} \left(2 \frac{db_{\frac{3}{2}}^{(0)}}{d\alpha} + \alpha \frac{d^2b_{\frac{3}{2}}^{(0)}}{(d\alpha)^2} \right),$$

$$\frac{dB^{(1)}}{da} = -\frac{1}{a'^2} \left(b_{\frac{3}{2}}^{(1)} + \alpha \frac{db_{\frac{3}{2}}^{(1)}}{d\alpha} \right), \quad \frac{d^2B^{(1)}}{(da)^2} = -\frac{1}{a'^3} \left(2 \frac{db_{\frac{3}{2}}^{(1)}}{d\alpha} + \alpha \frac{d^2b_{\frac{3}{2}}^{(1)}}{(d\alpha)^2} \right),$$

$$\frac{dB^{(2)}}{da} = -\frac{1}{a'^2} \left(b_{\frac{3}{2}}^{(2)} + \alpha \frac{db_{\frac{3}{2}}^{(2)}}{d\alpha} \right), \quad \frac{d^2B^{(2)}}{(da)^2} = -\frac{1}{a'^3} \left(2 \frac{db_{\frac{3}{2}}^{(2)}}{d\alpha} + \alpha \frac{d^2b_{\frac{3}{2}}^{(2)}}{(d\alpha)^2} \right),$$

и потомъ

$$2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2B^{(0)}}{(da)^2} = \frac{\alpha}{a'} \left(8 - 4b_{\frac{3}{2}}^{(0)} - 4\alpha \frac{db_{\frac{3}{2}}^{(0)}}{d\alpha} - \alpha^2 \frac{d^2b_{\frac{3}{2}}^{(0)}}{(d\alpha)^2} \right)$$

$$2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2B^{(1)}}{(da)^2} = -\frac{\alpha}{a'} \left(2b_{\frac{3}{2}}^{(1)} + 4\alpha \frac{db_{\frac{3}{2}}^{(1)}}{d\alpha} + \alpha^2 \frac{d^2b_{\frac{3}{2}}^{(1)}}{(d\alpha)^2} \right),$$

$$2B^{(1)} - 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2B^{(1)}}{(da)^2} = -\frac{\alpha^3}{a'} \frac{d^2b_{\frac{3}{2}}^{(1)}}{(d\alpha)^2},$$

$$6B^{(1)} + 6a \frac{dB^{(1)}}{da} + a^2 \frac{d^2B^{(1)}}{(da)^2} = -\frac{\alpha}{a'} \left(12b_{\frac{3}{2}}^{(1)} + 8\alpha \frac{db_{\frac{3}{2}}^{(1)}}{d\alpha} + \alpha^2 \frac{d^2b_{\frac{3}{2}}^{(1)}}{(d\alpha)^2} \right),$$

$$-2B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2B^{(2)}}{(da)^2} = -\frac{\alpha}{a'} \left(4\alpha \frac{db_{\frac{3}{2}}^{(2)}}{d\alpha} + \alpha^2 \frac{d^2b_{\frac{3}{2}}^{(2)}}{(d\alpha)^2} \right).$$

Наконецъ нетрудно найти, что

$$C^{(0)} = \frac{\alpha^2}{a'} b_{\frac{1}{2}}^{(0)}, \quad C^{(2)} = \frac{\alpha^2}{a'} b_{\frac{1}{2}}^{(2)},$$

гдѣ

$$b_{\frac{3}{2}}^{(0)} = \frac{1+\alpha^2}{(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} - \frac{6\alpha}{(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)},$$

$$b_{\frac{3}{2}}^{(2)} = \frac{1+\alpha^2}{(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{2(1-3\alpha^2+\alpha^4)}{\alpha(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}.$$

(16). Теперь опредѣляемъ:

$$\frac{db_{\frac{1}{2}}^{(0)}}{d\alpha} = \frac{\alpha}{1-\alpha^2} b_{\frac{1}{2}}^{(0)} - \frac{1}{1-\alpha^2} b_{\frac{1}{2}}^{(1)} = -\frac{\alpha}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} - \frac{3}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)},$$

$$\frac{d^2b_{\frac{1}{2}}^{(0)}}{(d\alpha)^2} = \frac{2\alpha^2}{(1-\alpha^2)^2} b_{\frac{1}{2}}^{(0)} + \frac{1-3\alpha^2}{\alpha(1-\alpha^2)^2} b_{\frac{1}{2}}^{(1)} = \frac{2}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} + \frac{3}{\alpha(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)},$$

$$\frac{d^3b_{\frac{1}{2}}^{(0)}}{(d\alpha)^3} = \frac{1+\alpha^2+6\alpha^4}{\alpha(1-\alpha^2)^3} b_{\frac{1}{2}}^{(0)} - \frac{2-5\alpha^2+11\alpha^4}{\alpha^2(1-\alpha^2)^3} b_{\frac{1}{2}}^{(1)} = -\frac{3(1-2\alpha^2)}{\alpha(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(0)} - \frac{3(2-\alpha^2)}{\alpha^2(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(1)},$$

$$\frac{d^4b_{\frac{1}{2}}^{(0)}}{(d\alpha)^4} = \frac{3(3-5\alpha^2+8\alpha^4)}{\alpha^2(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{6(3-5\alpha^2-\alpha^4)}{\alpha^3(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)};$$

$$\frac{db_{\frac{1}{2}}^{(1)}}{d\alpha} = \frac{1}{1-\alpha^2} b_{\frac{1}{2}}^{(0)} - \frac{1}{\alpha(1-\alpha^2)} b_{\frac{1}{2}}^{(1)} = -\frac{1}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} - \frac{3}{\alpha(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)},$$

$$\frac{d^2b_{\frac{1}{2}}^{(1)}}{(d\alpha)^2} = -\frac{1-3\alpha^2}{\alpha(1-\alpha^2)^2} b_{\frac{1}{2}}^{(0)} + \frac{2-4\alpha^2}{\alpha^2(1-\alpha^2)^2} b_{\frac{1}{2}}^{(1)} = \frac{3}{\alpha(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} + \frac{6}{\alpha^2(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)},$$

$$\frac{d^3b_{\frac{1}{2}}^{(1)}}{(d\alpha)^3} = \frac{3-7\alpha^2+12\alpha^4}{\alpha^2(1-\alpha^2)^3} b_{\frac{1}{2}}^{(0)} - \frac{6-17\alpha^2+19\alpha^4}{\alpha^3(1-\alpha^2)^3} b_{\frac{1}{2}}^{(1)} = -\frac{3(3-4\alpha^2)}{\alpha^2(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(0)} - \frac{3(6-5\alpha^2)}{\alpha^3(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(1)},$$

$$\frac{d^4b_{\frac{1}{2}}^{(1)}}{(d\alpha)^4} = -\frac{12-44\alpha^2+44\alpha^4-60\alpha^6}{\alpha^3(1-\alpha^2)^4} b_{\frac{1}{2}}^{(0)} + \frac{24-91\alpha^2+126\alpha^4-107\alpha^6}{\alpha^4(1-\alpha^2)^4} b_{\frac{1}{2}}^{(1)},$$

$$= \frac{6(6-13\alpha^2+10\alpha^4)}{\alpha^2(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{3(24-43\alpha^2+13\alpha^4)}{\alpha^4(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)};$$

$$b_{\frac{1}{2}}^{(2)} = \frac{2(1+\alpha^2)}{3\alpha} b_{\frac{1}{2}}^{(1)} - \frac{1}{3} b_{\frac{1}{2}}^{(0)} = \frac{1+\alpha^2}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} + \frac{2(1-\alpha^2+\alpha^4)}{\alpha(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)},$$

$$\begin{aligned}
\frac{db_{\frac{1}{2}}^{(2)}}{d\alpha} &= \frac{2+\alpha^2}{3\alpha(2-\alpha^2)} b_{\frac{1}{2}}^{(0)} - \frac{4-3\alpha^2+2\alpha^4}{3\alpha^2(1-\alpha^2)} b_{\frac{1}{2}}^{(1)} = -\frac{2-\alpha^2}{\alpha(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} - \frac{4+\alpha^2-2\alpha^4}{\alpha^2(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)}, \\
\frac{d^2b_{\frac{1}{2}}^{(2)}}{(d\alpha)^2} &= -\frac{2-4\alpha^2}{\alpha^2(1-\alpha^2)^2} b_{\frac{1}{2}}^{(0)} + \frac{4-7\alpha^2+\alpha^4}{\alpha^3(1-\alpha^2)^2} b_{\frac{1}{2}}^{(1)} = \frac{6}{\alpha^2(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} + \frac{3(4+\alpha^2)}{\alpha^3(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)}, \\
\frac{d^3b_{\frac{1}{2}}^{(2)}}{(d\alpha)^3} &= \frac{8-21\alpha^2+21\alpha^4}{\alpha^3(1-\alpha^2)^3} b_{\frac{1}{2}}^{(0)} - \frac{16-44\alpha^2+39\alpha^4-3\alpha^6}{\alpha^4(1-\alpha^2)^3} b_{\frac{1}{2}}^{(1)} = -\frac{24-27\alpha^2}{\alpha^3(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(0)} - \frac{48-36\alpha^2-9\alpha^4}{\alpha^4(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(1)}, \\
\frac{d^4b_{\frac{1}{2}}^{(0)}}{(d\alpha)^4} &= -\frac{40-145\alpha^2+186\alpha^4-129\alpha^6}{\alpha^4(1-\alpha^2)^4} b_{\frac{1}{2}}^{(0)} + \frac{80-300\alpha^2+412\alpha^4-252\alpha^6+12\alpha^8}{\alpha^5(1-\alpha^2)^4} b_{\frac{1}{2}}^{(1)} \\
&= \frac{3(40-85\alpha^2+51\alpha^4)}{\alpha^4(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{6(40-70\alpha^2+21\alpha^4+6\alpha^6)}{\alpha^5(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}; \\
b_{\frac{3}{2}}^{(0)} &= \frac{1+\alpha^2}{(1-\alpha^2)^2} b_{\frac{1}{2}}^{(0)} - \frac{2\alpha}{(1-\alpha^2)^2} b_{\frac{1}{2}}^{(1)} = \frac{1}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)}, \\
\frac{db_{\frac{3}{2}}^{(0)}}{d\alpha} &= \frac{5\alpha+3\alpha^3}{(1-\alpha^2)^3} b_{\frac{1}{2}}^{(0)} - \frac{2+7\alpha^2}{(1-\alpha^2)^3} b_{\frac{1}{2}}^{(1)} = \frac{3\alpha}{(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(0)} - \frac{3}{(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(1)}, \\
\frac{d^2b_{\frac{3}{2}}^{(0)}}{(d\alpha)^2} &= \frac{4+32\alpha^2+12\alpha^4}{(1-\alpha^2)^4} b_{\frac{1}{2}}^{(0)} + \frac{1-18\alpha^2-31\alpha^4}{\alpha(1-\alpha^2)^4} b_{\frac{1}{2}}^{(1)} = \frac{6(1+2\alpha^2)}{(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{3(1-7\alpha^2)}{\alpha(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}; \\
b_{\frac{5}{2}}^{(1)} &= \frac{2\alpha}{(1-\alpha^2)^2} b_{\frac{1}{2}}^{(0)} - \frac{1+\alpha^2}{(1-\alpha^2)^2} b_{\frac{1}{2}}^{(1)} = -\frac{3}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)}, \\
\frac{db_{\frac{5}{2}}^{(1)}}{d\alpha} &= \frac{1+7\alpha^2}{(1-\alpha^2)^3} b_{\frac{1}{2}}^{(0)} + \frac{1-7\alpha^2-2\alpha^4}{\alpha(1-\alpha^2)^3} b_{\frac{1}{2}}^{(1)} = \frac{3}{(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(0)} + \frac{3(1-2\alpha^2)}{\alpha(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(1)}, \\
\frac{d^2b_{\frac{5}{2}}^{(1)}}{(d\alpha)^2} &= \frac{1+14\alpha^2+33\alpha^4}{\alpha(1-\alpha^2)^4} b_{\frac{1}{2}}^{(0)} - \frac{2-6\alpha^2+46\alpha^4+6\alpha^6}{\alpha^2(1-\alpha^2)^4} b_{\frac{1}{2}}^{(1)} = -\frac{3(1-7\alpha^2)}{\alpha(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} - \frac{6(1-\alpha^2+3\alpha^4)}{\alpha^2(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}; \\
b_{\frac{7}{2}}^{(2)} &= \frac{1+\alpha^2}{(1-\alpha^2)^2} b_{\frac{1}{2}}^{(0)} - \frac{2(1-\alpha^2+\alpha^4)}{\alpha(1-\alpha^2)^2} b_{\frac{1}{2}}^{(1)} = -\frac{3}{(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} - \frac{6(1+\alpha^2)}{\alpha(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)}, \\
\frac{db_{\frac{7}{2}}^{(2)}}{d\alpha} &= -\frac{2-9\alpha^2-\alpha^4}{\alpha(1-\alpha^2)^3} b_{\frac{1}{2}}^{(0)} + \frac{4-11\alpha^2+\alpha^4-2\alpha^6}{\alpha^2(1-\alpha^2)^3} b_{\frac{1}{2}}^{(1)} = \frac{3(2-\alpha^2)}{\alpha(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(0)} + \frac{3(4-3\alpha^2-2\alpha^4)}{\alpha^2(1-\alpha^2)^3} b_{-\frac{1}{2}}^{(1)}, \\
\frac{d^2b_{\frac{7}{2}}^{(2)}}{(d\alpha)^2} &= \frac{6-18\alpha^2+58\alpha^4+2\alpha^6}{\alpha^2(1-\alpha^2)^4} b_{\frac{1}{2}}^{(0)} - \frac{12-45\alpha^2+74\alpha^4+3\alpha^6+4\alpha^8}{\alpha^3(1-\alpha^2)^4} b_{\frac{1}{2}}^{(1)} \\
&= -\frac{6(3-7\alpha^2+\alpha^4)}{\alpha^2(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} - \frac{3(12-21\alpha^2+11\alpha^4+4\alpha^6)}{\alpha^3(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}.
\end{aligned}$$

Отсюда:

$$\begin{aligned}
\frac{1}{2}A^{(0)} &= -\frac{1+\alpha^2}{2\alpha'(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} - \frac{6\alpha}{2\alpha'(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)}, \\
2a \frac{dA^{(0)}}{da} + a^2 \frac{d^2A^{(0)}}{(da)^2} &= \frac{3\alpha}{a'(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)},
\end{aligned}$$

$$\begin{aligned}
4a \frac{dA^{(0)}}{da} + 12a^2 \frac{d^2 A^{(0)}}{(da)^2} + 8a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} &= -\frac{18\alpha^3}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} - \frac{9(\alpha^2 + \alpha^4)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)}, \\
24a \frac{dA^{(0)}}{da} + 36a^2 \frac{d^2 A^{(0)}}{(da)^2} + 12a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} &= \frac{18\alpha - 6\alpha^3 + 6\alpha^5}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} - \frac{3\alpha^2}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)}, \\
4a^3 \frac{d^3 A^{(0)}}{(da)^3} + a^4 \frac{d^4 A^{(0)}}{(da)^4} &= \frac{3(\alpha^2 + 7\alpha^4)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{6(\alpha - \alpha^3 + 3\alpha^5)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}, \\
2A^{(1)} - 2a \frac{dA^{(1)}}{da} - a^2 \frac{d^2 A^{(1)}}{(da)^2} &= -\frac{3\alpha}{a'(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} - \frac{6(1+\alpha^2)}{a'(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)}, \\
-4A^{(1)} + 4a \frac{dA^{(1)}}{da} + 22a^2 \frac{d^2 A^{(1)}}{(da)^2} + 10a^3 \frac{d^3 A^{(1)}}{(da)^3} + a^4 \frac{d^4 A^{(1)}}{(da)^4} &= -\frac{6(4\alpha^3 - \alpha^5)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{3(9\alpha^2 - 7\alpha^4 + 4\alpha^6)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}, \\
4a^2 \frac{d^2 A^{(1)}}{(da)^2} + 6a^3 \frac{d^3 A^{(1)}}{(da)^3} + a^4 \frac{d^4 A^{(1)}}{(da)^4} &= \frac{6(\alpha - 4\alpha^3)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{3(4 - 7\alpha^2 + 9\alpha^4)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}, \\
12A^{(2)} - 12a \frac{dA^{(2)}}{da} + 6a^2 \frac{d^2 A^{(2)}}{(da)^2} + 8a^3 \frac{d^3 A^{(2)}}{(da)^3} + a^4 \frac{d^4 A^{(2)}}{(da)^4} &= -\frac{9(\alpha^2 + \alpha^4)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{6(5\alpha - 7\alpha^3 + 5\alpha^5)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}; \\
2B^{(0)} + 2a \frac{dB^{(0)}}{da} + a^2 \frac{d^2 B^{(0)}}{(da)^2} &= \frac{8\alpha}{a'} - \frac{2(2\alpha + 5\alpha^3 + 2\alpha^5)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{9(\alpha^2 + \alpha^4)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}, \\
B^{(1)} &= \frac{3\alpha}{a'(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)}, \\
2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} &= -\frac{9(\alpha^2 + \alpha^4)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{18\alpha^3}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}, \\
2B^{(1)} - 2a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} &= \frac{3(\alpha^2 - 7\alpha^4)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{6(\alpha - \alpha^3 + 3\alpha^5)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}, \\
6B^{(1)} + 6a \frac{dB^{(1)}}{da} + a^2 \frac{d^2 B^{(1)}}{(da)^2} &= -\frac{3(7\alpha^2 - \alpha^4)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} + \frac{6(3\alpha - \alpha^3 + \alpha^5)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}, \\
-2B^{(2)} + 2a \frac{dB^{(2)}}{da} + a^2 \frac{d^2 B^{(2)}}{(da)^2} &= -\frac{6(\alpha + \alpha^3 + \alpha^5)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} - \frac{3(4 - 7\alpha^2 - 7\alpha^4 + 4\alpha^6)}{a'(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)}.
\end{aligned}$$

И такъ, опустивъ члены четвертаго порядка относительно наклоненій и эксцентритетовъ, получимъ:

$$\begin{aligned}
\frac{dh}{dt} &= \frac{3m'n\alpha^2}{4(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} l - \frac{3m'n\alpha}{2(1-\alpha^2)^2} \left[(1 + \alpha^2) b_{-\frac{1}{2}}^{(1)} + \frac{\alpha}{2} b_{-\frac{1}{2}}^{(0)} \right] \cdot l' \\
&+ (1) \frac{9m'n\alpha^4}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} \cdot l \left[(l'^2 + h'^2) - (q' - q)^2 - (p' - p)^2 \right] + (2) \frac{3m'n\alpha^2(1-\alpha^2+3\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} l(l^2 + h^2) \\
&+ (3) \frac{3m'n\alpha^3(1+7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} l(l^2 + h^2) - (4) \frac{9m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} l \left[(l'^2 + h'^2) - (q' - q)^2 - (p' - p)^2 \right] \\
&- (5) \frac{3m'na(4-7\alpha^2+9\alpha^4)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [2l(ll' + hh') + l'(l^2 + h^2)] - (6) \frac{3m'n\alpha^2(1-4\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [2l(ll' + hh') + l'(l^2 + h^2)] \\
&- (7) \frac{3m'n\alpha^3(9-7\alpha^2+4\alpha^4)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} l'(l^2 + h'^2) + (8) \frac{3m'n\alpha^4(4-\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} l'(l^2 + h'^2)
\end{aligned}$$

$$\begin{aligned}
& + (9) \frac{3m'n\alpha^2(5-7\alpha^2+5\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [l(l'^2 - h'^2) + 2l'h'h] - \frac{9m'n\alpha^3(1+\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [l(l'^2 - h'^2) + 2l'h'h] \\
& + (10) \frac{m'n\alpha^2}{2} [l'(p'-p)^2 - h'(q'(p'-p) - p(q'-q))] - (11) \frac{m'n\alpha^2(2+5\alpha^2+2\alpha^4)}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [l'(p'-p)^2 - h'(q'(p'-p) - p(q'-q))] \\
& + (12) \frac{9m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [l'(p'-p)^2 - h'(q'(p'-p) - p(q'-q))] \\
& + (13) \frac{3m'n\alpha^2(3-\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [l((q'-q)^2 - (p'-p)^2) + 2h(p'-p)(q'-q)] \\
& - (14) \frac{3m'n\alpha^3(7-\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [l((q'-q)^2 - (p'-p)^2) + 2h(p'-p)(q'-q)] \\
& - (15) \frac{3m'n\alpha(4-7\alpha^2-7\alpha^4+4\alpha^6)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [l((q'-q)^2 + (p'-p)^2) + 2h'(qp' - q'p)] \\
& - (16) \frac{3m'n\alpha^2(1+\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [l((q'-q)^2 + (p'-p)^2) + 2h'(qp' - q'p)] \\
& - \frac{3m'n\alpha^2}{8(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} l(l^2 + h^2) + \frac{3m'n\alpha}{4(1-\alpha^2)} \left[(1+\alpha^2) b_{-\frac{1}{2}}^{(1)} + \frac{\alpha}{2} b_{-\frac{1}{2}}^{(0)} \right] l'(l^2 + h^2),
\end{aligned}$$

И

$$\begin{aligned}
\frac{dl}{dt} = & - \frac{3m'n\alpha^2}{4(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} \cdot h + \frac{3m'n\alpha}{2(1-\alpha^2)} \left[(1+\alpha^2) b_{-\frac{1}{2}}^{(1)} + \frac{\alpha}{2} b_{-\frac{1}{2}}^{(0)} \right] h' \\
& - (1) \frac{9m'n\alpha^4}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} h [l'^2 + h'^2 - (q'-q)^2 - (p'-p)^2] - (2) \frac{3m'n\alpha^2(1-\alpha^2+3\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} h (l'^2 + h'^2) \\
& - (3) \frac{3m'n\alpha^3(1+7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} h (l'^2 + h'^2) + (4) \frac{9m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} h [l'^2 + h'^2 - (q'-q)^2 - (p'-p)^2] \\
& + (5) \frac{3m'n\alpha(4-7\alpha^2+9\alpha^4)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [2h(ll' + hh') + h'(l'^2 + h'^2)] + (6) \frac{3m'n\alpha^2(1-4\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [2h(ll' + hh') + h'(l'^2 + h'^2)] \\
& + (7) \frac{3m'n\alpha^3(9-7\alpha^2+4\alpha^4)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} h' (l'^2 + h'^2) - (8) \frac{3m'n\alpha^4(4-\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} h' (l'^2 + h'^2) \\
& - (9) \frac{3m'n\alpha^2(5-7\alpha^2+5\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [h(h'^2 - l'^2) + 2h'l'l] + \frac{9m'n\alpha^3(1+\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [h(h'^2 - l'^2) + 2h'l'l] \\
& - (10) \frac{m'n\alpha^2}{2} [h'(q'-q)^2 - l'(p'(q'-q) - q(p'-p))] \\
& + (11) \frac{m'n\alpha^2(2+5\alpha^2+2\alpha^4)}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [h'(q'-q)^2 - l'(p'(q'-q) - q(p'-p))] \\
& - (12) \frac{9m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [h'(q'-q)^2 - l'(p'(q'-q) - q(p'-p))] \\
& - (13) \frac{3m'n\alpha^2(3-\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [2l(p'-p)(q'-q) - h((q'-q)^2 - (p'-p)^2)] \\
& + (14) \frac{3m'n\alpha^3(7-\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [2l(p'-p)(q'-q) - h((q'-q)^2 - (p'-p)^2)]
\end{aligned}$$

$$+ (15) \frac{3m'n\alpha(4-7\alpha^2-7\alpha^4+4\alpha^6)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [h'((q'-q)^2 + (p'-p)^2) - 2l'(qp' - q'p)]$$

$$+ (16) \frac{3m'n\alpha^2(1+\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [h'((q'-q)^2 + (p'-p)^2) - 2l'(qp' - q'p)]$$

$$+ \frac{3m'n\alpha^2}{8(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} h(l^2 + h^2) - \frac{3m'n\alpha}{4(1-\alpha^2)^4} \left[(1 + \alpha^2) b_{-\frac{1}{2}}^{(1)} + \frac{\alpha}{2} b_{-\frac{1}{2}}^{(0)} \right] h'(l^2 + h^2).$$

Потомъ

$$\frac{dp}{dt} = \frac{3m'n\alpha^2}{4(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} (q'-q) + \frac{3m'n\alpha^2}{8(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} [2(qq'+p'p)(q'-q) - q'((q'-q)^2 + (p'-p)^2) - 3q(q'^2 - q^2) - 3p(q'p' - qp)]$$

$$+ \frac{9m'n\alpha^4}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [h'^2 + l'^2 + h^2 + l^2](q'-q) - \frac{9m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} (h'^2 + l'^2 + h^2 + l^2)(q'-q)$$

$$- \frac{3m'n\alpha^2(1-\alpha^2+3\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(l'^2 - h'^2)(q'-q) + 2l'h'(p'-p)] - \frac{3m'n\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(l'^2 - h'^2)(q'-q) + 2l'h'(p'-p)]$$

$$- \frac{3m'n\alpha^2(3-\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(l^2 - h^2)(q'-q) + 2lh(p'-p)] + \frac{3m'n\alpha^3(7-\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(l^2 - h^2)(q'-q) + 2lh(p'-p)]$$

$$+ \frac{3m'n\alpha(4-7\alpha^2-7\alpha^4+4\alpha^6)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(l'l' + hh')(q'-q) - (h'l - hl')p']$$

$$+ \frac{3m'n\alpha^2(1+\alpha^2+\alpha^4)}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(l'l' + hh')(q'-q) - (h'l - hl')p']$$

$$+ \frac{3m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(0)} [(q'-q)^3 + (q'-q)(p'-p)^2 - p'(p'q - q'p)]$$

$$- \frac{9m'n\alpha^4}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(q'-q)^3 + (q'-q)(p'-p)^2 - p'(p'q - q'p)]$$

$$+ \frac{3m'n\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(q'-q)^3 + (q'-q)(p'-p)^2 + 2p'(p'q - q'p)]$$

$$+ \frac{3m'n\alpha^3(1+\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(q'-q)^3 + (q'-q)(p'-p)^2 + 2p'(p'q - q'p)]$$

$$- \frac{m'n\alpha^2}{2} [2hh'(q'-q) + (h'l + hl')p - 2l'hp'] + \frac{m'n\alpha^2(2+5\alpha^2+2\alpha^4)}{8(1-\alpha^2)^4} [2hh'(q'-q) + (h'l + l'h)p - 2l'hp']$$

$$- \frac{9m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [2hh'(q'-q) + (h'l + l'h)p - 2l'hp'] + \frac{3m'n\alpha^2}{8(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} (q'-q)[l^2 + h^2 + 3p^2 + 3q^2],$$

II

$$\frac{dq}{dt} = - \frac{3m'n\alpha^2}{4(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} (p'-p) - \frac{3m'n\alpha^2}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [2(p'-p)(q'q+p'p) - p'((q'-q)^2 + (p'-p)^2) - 3p(p'^2 - p^2) - 3q(q'p' - qp)]$$

$$- \frac{9m'n\alpha^4}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} (h'^2 + l'^2 + h^2 + l^2)(p'-p) + \frac{9m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} (h'^2 + l'^2 + h^2 + l^2)(p'-p)$$

$$- \frac{3m'n\alpha^2(1-\alpha^2+3\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(l'^2 - h'^2)(p'-p) - 2l'h'(q'-q)] - \frac{3m'n\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(l'^2 - h'^2)(p'-p) - 2l'h'(q'-q)]$$

$$- \frac{3m'n\alpha^2(3-\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(l^2 - h^2)(p'-p) - 2lh(q'-q)] + \frac{3m'n\alpha^3(7-\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(l^2 - h^2)(p'-p) - 2lh(q'-q)]$$

*

$$\begin{aligned}
& - \frac{3m'n\alpha(4-7\alpha^2-7\alpha^4+4\alpha^6)}{16(4-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(l'l + hh')(p' - p) + (h'l - l'h)q'] \\
& - \frac{3m'n\alpha^2(1+\alpha^2+\alpha^4)}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(l'l + hh')(p' - p) + (lh' - l'h)q'] \\
& + \frac{9m'n\alpha^4}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(p' - p)^3 + (p' - p)(q' - q)^2 + q'(p'q - pq')] \\
& - \frac{3m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(p' - p)^3 + (p' - p)(q' - q)^2 + q'(p'q - pq')] \\
& - \frac{3m'n\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [(p' - p)^3 + (p' - p)(q' - q)^2 - 2q'(p'q - pq')] \\
& - \frac{3m'n\alpha^3(1+\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [(p' - p)^3 + (p' - p)(q' - q)^2 - 2q'(p'q - pq')] \\
& + \frac{m'n\alpha^2}{2} [2l'l(p' - p) + (h'l + hl')q - 2lh'q'] - \frac{m'n\alpha^2(2+5\alpha^2+2\alpha^4)}{8(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} [2l'l(p' - p) + (h'l + hl')q - 2lh'q'] \\
& + \frac{9m'n\alpha^3(1+\alpha^2)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} [2l'l(p' - p) + (h'l + hl')q - 2lh'q'] - \frac{3m'n\alpha^2}{8(1-\alpha^2)^2} b_{-\frac{1}{2}}^{(1)} (p' - p)[l^2 + h^2 + 3p^2 + 3q^2].
\end{aligned}$$

(17). Приступаемъ къ вычисленіямъ:

Меркурій и Венера.

$(m, m') = 2,910271(0,4639335)$	$(m', m) = 0,285177(\bar{1},4551150)$
$[m, m'] = 1,870072(0,2718584)$	$[m', m] = 0,183248(\bar{1},2630399)$
$(m, m')_1 = -2,455155(0,3900791)$	$(m', m)_1 = -0,240580(\bar{1},3812606)$
$(m, m')_2 = -1,371145(0,1370833)$	$(m', m)_2 = -0,134358(\bar{1},1282649)$
$(m, m')_3 = 9,568926(0,9808632)$	$(m', m)_3 = 0,937658(\bar{1},9720447)$
$(m, m')_4 = 12,289898(1,0895484)$	$(m', m)_4 = 1,204286(0,0807299)$
$(m, m')_5 = -3,648834(0,5621542)$	$(m', m)_5 = -0,357549(\bar{1},5533357)$
$(m, m')_6 = -0,866350(\bar{1},9376936)$	$(m', m)_6 = -0,084893(\bar{2},9288751)$
$(m, m')_7 = -2,799759(0,4471207)$	$(m', m)_7 = -0,274348(\bar{1},4383022)$
$(m, m')_8 = 6,328966(0,8013327)$	$(m', m)_8 = 0,620175(\bar{1},7925142)$
$(m, m')_9 = -4,865408(0,6871193)$	$(m', m)_9 = -0,476751(\bar{1},6783008)$
$(m, m')_{10} = 1,917528(0,2827415)$	$(m', m)_{10} = 0,187898(\bar{1},2739230)$
$(m, m')_{11} = 14,265952(1,1543009)$	$(m', m)_{11} = 1,397920(0,1454824)$
$(m, m')_{12} = -2,950797(0,4699393)$	$(m', m)_{12} = -0,289148(\bar{1},4611208)$
$(m, m')_{13} = -3,994286(0,6014391)$	$(m', m)_{13} = -0,391399(\bar{1},5926206)$

$$\begin{aligned}
 (m, m')_{14} &= 10''690024(1,0289787) & (m', m)_{14} &= 1''047515(0,0201602) \\
 (m, m')_{15} &= -2''022395(0,3058659) & (m', m)_{15} &= -0''198174(\bar{1},2970474) \\
 (m, m')_{16} &= 8''143072(0,9107883) & (m', m)_{16} &= 0''797939(\bar{1},9019698)
 \end{aligned}$$

Меркурій и Земля.

$$\begin{aligned}
 (m, m'') &= 0''884164(\bar{1},9465327) & (m'', m) &= 0''065888(\bar{2},8188094) \\
 [m, m''] &= 0''419413(\bar{1},6226419) & [m'', m] &= 0''031254(\bar{2},4949187) \\
 (m, m'')_1 &= -0''274961(\bar{1},4392715) & (m'', m)_1 &= -0''020490(\bar{2},3115483) \\
 (m, m'')_2 &= -0''280601(\bar{1},4480894) & (m'', m)_2 &= -0''020910(\bar{2},3203662) \\
 (m, m'')_3 &= 0''662981(\bar{1},8215011) & (m'', m)_3 &= 0''049405(\bar{2},6937779) \\
 (m, m'')_4 &= 2''232374(0,3487672) & (m'', m)_4 &= 0''166358(\bar{1},2210440, \\
 (m, m'')_5 &= -1''245578(0,0953708) & (m'', m)_5 &= -0''092821(\bar{2},9676476) \\
 (m, m'')_6 &= 0''669754(\bar{1},8259152) & (m'', m)_6 &= 0''049910(\bar{2},6981920) \\
 (m, m'')_7 &= -0''475963(\bar{1},6775734) & (m'', m)_7 &= -0''035469(\bar{2},5498502) \\
 (m, m'')_8 &= 0''964509(\bar{1},9843062) & (m'', m)_8 &= 0''071876(\bar{2},8565830) \\
 (m, m'')_9 &= -1''242685(0,0943614) & (m'', m)_9 &= -0''092605(\bar{2},9666382) \\
 (m, m'')_{10} &= 1''121993(0,0499904) & (m'', m)_{10} &= 0''083611(\bar{2},9222672) \\
 (m, m'')_{11} &= 3''114154(0,4933401) & (m'', m)_{11} &= 0''232069(\bar{1},3656169) \\
 (m, m'')_{12} &= -0''408375(\bar{1},6110596) & (m'', m)_{12} &= -0''030432(\bar{2},4833364) \\
 (m, m'')_{13} &= -0''875823(\bar{1},9437531) & (m'', m)_{13} &= -0''065468(\bar{2},8160299) \\
 (m, m'')_{14} &= 2''216552(0,3456769) & (m'', m)_{14} &= 0''165178(\bar{1},2179537) \\
 (m, m'')_{15} &= -1''108981(0,0449242) & (m'', m)_{15} &= -0''082641(\bar{2},9172010) \\
 (m, m'')_{16} &= 1''959852(0,2922234) & (m'', m)_{16} &= 0''146049(\bar{1},1645002)
 \end{aligned}$$

Меркурій и Марсъ.

$$\begin{aligned}
 (m, m''') &= 0''027981(\bar{2},4468676) & (m''', m) &= 0''012602(\bar{2},1004466) \\
 [m, m'''] &= 0''008813(\bar{3},9451412) & [m''', m] &= 0''003969(\bar{3},5987202) \\
 (m, m''')_1 &= -0''002708(\bar{3},4328082) & (m''', m)_1 &= -0''001220(\bar{3},0863872) \\
 (m, m''')_2 &= -0''007577(\bar{3},8795461) & (m''', m)_2 &= -0''003413(\bar{3},5331251) \\
 (m, m''')_3 &= 0''011890(\bar{2},0751929) & (m''', m)_3 &= 0''005355(\bar{3},7287719) \\
 (m, m''')_4 &= 0''052312(\bar{2},7186003) & (m''', m)_4 &= 0''023560(\bar{2},3721793) \\
 (m, m''')_5 &= -0''056412(\bar{2},7513781) & (m''', m)_5 &= -0''025407(\bar{2},4049571) \\
 (m, m''')_6 &= 0''047829(\bar{2},6796940) & (m''', m)_6 &= 0''021541(\bar{2},3332730)
 \end{aligned}$$

$(m, m''')_7 = -0''008697(\bar{3}, 9393752)$	$(m''', m)_7 = -0''003917(\bar{3}, 5929542)$
$(m, m''')_8 = 0''016377(\bar{2}, 2142355)$	$(m''', m)_8 = 0''007375(\bar{3}, 8678145)$
$(m, m''')_9 = -0''036524(\bar{2}, 5625839)$	$(m''', m)_9 = -0''016449(\bar{2}, 2161629)$
$(m, m''')_{10} = 0''064780(\bar{2}, 8114457)$	$(m''', m)_{10} = 0''029176(\bar{2}, 4650247)$
$(m, m''')_{11} = 0''100196(\bar{1}, 0008502)$	$(m''', m)_{11} = 0''045126(\bar{2}, 6544292)$
$(m, m''')_{12} = -0''006484(\bar{3}, 8119690)$	$(m''', m)_{12} = -0''002921(\bar{3}, 4655480)$
$(m, m''')_{13} = -0''023432(\bar{2}, 3698192)$	$(m''', m)_{13} = -0''010553(\bar{2}, 0233082)$
$(m, m''')_{14} = 0''056801(\bar{2}, 7543609)$	$(m''', m)_{14} = 0''025582(\bar{2}, 4079399)$
$(m, m''')_{15} = -0''055381(\bar{2}, 7433627)$	$(m''', m)_{15} = -0''024942(\bar{2}, 3969417)$
$(m, m''')_{16} = 0''068904(\bar{2}, 8382499)$	$(m''', m)_{16} = 0''031033(\bar{2}, 4918289)$

Меркурій и Юпитеръ.

$(m, m^{IV}) = 1''599599(0, 2040113)$	$(m^{IV}, m) = 0, 000153(\bar{4}, 1838717)$
$[m, m^{IV}] = 0''148687(\bar{1}, 1722746)$	$[m^{IV}, m] = 0''000014(\bar{5}, 1521350)$
$(m, m^{IV})_1 = -0''013430(\bar{2}, 1280935)$	$(m^{IV}, m)_1 = -0''000001(\bar{6}, 1079539)$
$(m, m^{IV})_2 = -0''402163(\bar{1}, 6044024)$	$(m^{IV}, m)_2 = -0''000038(\bar{5}, 5842628)$
$(m, m^{IV})_3 = 0''420905(\bar{1}, 6241847)$	$(m^{IV}, m)_3 = 0''000040(\bar{5}, 6040451)$
$(m, m^{IV})_4 = 2''444685(0, 3882229)$	$(m^{IV}, m)_4 = 0''000233(\bar{4}, 3680833)$
$(m, m^{IV})_5 = -10''765171(1, 0320210)$	$(m^{IV}, m)_5 = -0''001027(\bar{3}, 0118814)$
$(m, m^{IV})_6 = 10''651119(1, 0273953)$	$(m^{IV}, m)_6 = 0''001016(\bar{3}, 0072557)$
$(m, m^{IV})_7 = -0''134803(\bar{1}, 1297017)$	$(m^{IV}, m)_7 = -0''000013(\bar{5}, 1095621)$
$(m, m^{IV})_8 = 0''240850(\bar{1}, 3817477)$	$(m^{IV}, m)_8 = 0''000023(\bar{5}, 3616081)$
$(m, m^{IV})_9 = -2''006213(0, 3023770)$	$(m^{IV}, m)_9 = -0''000191(\bar{4}, 2822374)$
$(m, m^{IV})_{10} = 14''184516(1, 1518146)$	$(m^{IV}, m)_{10} = 0''001354(\bar{3}, 1316750)$
$(m, m^{IV})_{11} = 14''724498(1, 1680405)$	$(m^{IV}, m)_{11} = 0''001406(\bar{3}, 1479009)$
$(m, m^{IV})_{12} = -0''090756(\bar{2}, 9578752)$	$(m^{IV}, m)_{12} = -0''000009(\bar{6}, 9377356)$
$(m, m^{IV})_{13} = -1''210866(0, 0830965)$	$(m^{IV}, m)_{13} = -0''000115(\bar{4}, 0629569)$
$(m, m^{IV})_{14} = 2''834183(0, 4524282)$	$(m^{IV}, m)_{14} = 0''000270(\bar{4}, 4322884)$
$(m, m^{IV})_{15} = -10''763820(1, 0319665)$	$(m^{IV}, m)_{15} = -0''001027(\bar{3}, 0118269)$
$(m, m^{IV})_{16} = 10''952922(1, 0395302)$	$(m^{IV}, m)_{16} = 0''001045(\bar{3}, 0193906)$

Меркурій и Сатурнъ.

$(m, m^V) = 0,077035(\bar{2},8866905)$	$(m^V, m) = 0,000018(\bar{5},2592865)$
$[m, m^V] = 0,003907(\bar{3},5919186)$	$[m^V, m] = 0,000009(\bar{6},9645146)$
$(m, m^V)_1 = -0,000101(\bar{4},2808647)$	$(m^V, m)_1 = -0,000000(\bar{8},6534607)$
$(m, m^V)_2 = -0,019290(\bar{2},2853497)$	$(m^V, m)_2 = -0,000004(\bar{6},6579457)$
$(m, m^V)_3 = 0,019557(\bar{2},2913076)$	$(m^V, m)_3 = 0,000005(\bar{6},6639030)$
$(m, m^V)_4 = 0,019557(\bar{2},2913076)$	$(m^V, m)_4 = 0,000027(\bar{5},4377919)$
$(m, m^V)_5 = -0,949545(\bar{1},9775157)$	$(m^V, m)_5 = -0,000224(\bar{4},3501117)$
$(m, m^V)_6 = 0,946595(\bar{1},9761642)$	$(m^V, m)_6 = 0,000223(\bar{4},3487602)$
$(m, m^V)_7 = -0,003916(\bar{3},5928574)$	$(m^V, m)_7 = -0,000000(\bar{7},9654534)$
$(m, m^V)_8 = 0,006274(\bar{3},7975670)$	$(m^V, m)_8 = 0,000001(\bar{6},1701630)$
$(m, m^V)_9 = -0,096389(\bar{2},9840309)$	$(m^V, m)_9 = -0,000023(\bar{5},3566269)$
$(m, m^V)_{10} = 1,261627(0,1009312)$	$(m^V, m)_{10} = 0,000297(\bar{4},4735272)$
$(m, m^V)_{11} = 1,275729(0,1057585)$	$(m^V, m)_{11} = 0,000301(\bar{4},4783545)$
$(m, m^V)_{12} = -0,002356(\bar{3},3722236)$	$(m^V, m)_{12} = -0,000000(\bar{7},7448196)$
$(m, m^V)_{13} = -0,057935(\bar{2},7629454)$	$(m^V, m)_{13} = -0,000014(\bar{5},1355414)$
$(m, m^V)_{14} = 0,135309(\bar{1},1313261)$	$(m^V, m)_{14} = 0,000032(\bar{5},5039221)$
$(m, m^V)_{15} = -0,949534(\bar{1},9775108)$	$(m^V, m)_{15} = -0,000224(\bar{4},3501068)$
$(m, m^V)_{16} = 0,954444(\bar{1},9797504)$	$(m^V, m)_{16} = 0,000225(\bar{4},3523464)$

Меркурій и Уранъ.

$(m, m^{VI}) = 0,001852(\bar{3},2677017)$	$(m^{VI}, m) = 0,000002(\bar{6},1963255)$
$[m, m^{VI}] = 0,000046(\bar{5},6665014)$	$[m^{VI}, m] = 0,000000(\bar{8},5951258)$
$(m, m^{VI})_1 = -0,000001(\bar{6},0539693)$	$(m^{VI}, m)_1 = -0,000000(\bar{10},9825931)$
$(m, m^{VI})_2 = -0,000463(\bar{4},6655818)$	$(m^{VI}, m)_2 = -0,000000(\bar{7},5944425)$
$(m, m^{VI})_3 = 0,000465(\bar{4},6672978)$	$(m^{VI}, m)_3 = 0,000000(\bar{7},5959216)$
$(m, m^{VI})_4 = 0,002782(\bar{3},4443897)$	$(m^{VI}, m)_4 = 0,000002(\bar{6},3730135)$
$(m, m^{VI})_5 = -0,045898(\bar{2},6617939)$	$(m^{VI}, m)_5 = -0,000039(\bar{5},5904171)$
$(m, m^{VI})_6 = 0,045864(\bar{2},6614724)$	$(m^{VI}, m)_6 = 0,000039(\bar{5},5900962)$
$(m, m^{VI})_7 = -0,002084(\bar{3},3190705)$	$(m^{VI}, m)_7 = -0,000002(\bar{6},2476943)$
$(m, m^{VI})_8 = 0,000075(\bar{5},8740189)$	$(m^{VI}, m)_8 = 0,000000(\bar{8},8026427)$
$(m, m^{VI})_9 = -0,002316(\bar{3},3647179)$	$(m^{VI}, m)_9 = -0,000002(\bar{6},2933417)$

$(m, m'')_{10} = 0,061145(\bar{2},7863674)$	$(m', m)_{10} = 0,000052(\bar{5},7149912)$
$(m, m'')_{11} = 0,061314(\bar{2},7875611)$	$(m', m)_{11} = 0,000052(\bar{5},7161849)$
$(m, m'')_{12} = -0,000028(\bar{5},4482047)$	$(m', m)_{12} = -0,000000(\bar{8},3768285)$
$(m, m'')_{13} = -0,001390(\bar{3},1430579)$	$(m', m)_{13} = -0,000001(\bar{6},0716817)$
$(m, m'')_{14} = 0,003242(\bar{3},5108871)$	$(m', m)_{14} = 0,000003(\bar{6},4395109)$
$(m, m'')_{15} = -0,045899(\bar{2},6618047)$	$(m', m)_{15} = -0,000039(\bar{5},5904285)$
$(m, m'')_{16} = 0,045957(\bar{2},6623542)$	$(m', m)_{16} = 0,000039(\bar{5},5909780)$

Венера и Земля.

$(m', m'') = 6,803375(0,8327244)$	$(m'', m') = 5,173924(0,7138200)$
$[m', m''] = 5,664681(0,7531755)$	$[m'', m'] = 4,307954(0,6342711)$
$(m', m'')_1 = -23,487459(1,3708360)$	$(m'', m')_1 = -17,862062(1,2519316)$
$(m', m'')_2 = -9,711709(0,9872957)$	$(m'', m')_2 = -7,385693(0,8683913)$
$(m', m'')_3 = 42,630759(1,6297230)$	$(m'', m')_3 = 32,420415(1,5108186)$
$(m', m'')_4 = 83,563777(1,9220180)$	$(m'', m')_4 = 63,549714(1,8031136)$
$(m', m'')_5 = -14,487667(1,1609964)$	$(m'', m')_5 = -11,017725(1,0420920)$
$(m', m'')_6 = -27,628382(1,4413554)$	$(m'', m')_6 = -21,011210(1,3224510)$
$(m', m'')_7 = -17,405984(1,2406986)$	$(m'', m')_7 = -13,237139(1,1217942)$
$(m', m'')_8 = 45,988963(1,6626537)$	$(m'', m')_8 = 34,974324(1,5437493)$
$(m', m'')_9 = -10,123973(1,0053510)$	$(m'', m')_9 = -7,699217(0,8864466)$
$(m', m'')_{10} = 1,533729(0,1857487)$	$(m'', m')_{10} = 1,166389(0,0668443)$
$(m', m'')_{11} = 87,027400(1,9396560)$	$(m'', m')_{11} = 66,183791(1,8207516)$
$(m', m'')_{12} = -27,730180(1,3932273)$	$(m'', m')_{12} = -18,807148(1,2743229)$
$(m', m'')_{13} = -20,579124(1,3134269)$	$(m'', m')_{13} = -15,650293(1,1945225)$
$(m', m'')_{14} = 61,700628(1,7902897)$	$(m'', m')_{14} = 46,922943(1,6713853)$
$(m', m'')_{15} = -5,201756(0,7161500)$	$(m'', m')_{15} = -3,955927(0,5972456)$
$(m', m'')_{16} = 45,429421(1,6573372)$	$(m'', m')_{16} = 34,548787(1,5384328)$

Венера и Марсъ.

$(m', m''') = 0,102035(\bar{1},0087468)$	$(m'', m') = 0,468969(\bar{1},6711449)$
$[m', m'''] = 0,058710(\bar{2},7687122)$	$[m'', m'] = 0,269842(\bar{1},4311103)$
$(m', m''')_1 = -0,057480(\bar{2},7595224)$	$(m'', m')_1 = -0,264192(\bar{1},4219205)$

$(m', m''')_2 = -0''039406(\bar{2}, 5955698)$	$(m'', m')_2 = -0''181120(\bar{1}, 2579679)$
$(m', m''')_3 = 0''119299(\bar{1}, 0766370)$	$(m'', m')_3 = 0''548321(\bar{1}, 7390351)$
$(m', m''')_4 = 0''340289(\bar{1}, 5318477)$	$(m'', m')_4 = 1''564033(0, 1942458)$
$(m', m''')_5 = -0''128927(\bar{1}, 1103456)$	$(m'', m')_5 = -0''592575(\bar{1}, 7727437)$
$(m', m''')_6 = 0''019216(\bar{2}, 2836778)$	$(m'', m')_6 = 0''088323(\bar{2}, 9460759)$
$(m', m''')_7 = -0''076944(\bar{2}, 8861753)$	$(m'', m')_7 = -0''353649(\bar{1}, 5485734)$
$(m', m''')_8 = 0''165874(\bar{1}, 2197780)$	$(m'', m')_8 = 0''762388(\bar{1}, 8821761)$
$(m', m''')_9 = -0''156031(\bar{1}, 1932114)$	$(m'', m')_9 = -0''717149(\bar{1}, 8556095)$
$(m', m''')_{10} = 0''088553(\bar{2}, 9472042)$	$(m'', m')_{10} = 0''407007(\bar{1}, 6096023)$
$(m', m''')_{11} = 0''419677(\bar{1}, 6229158)$	$(m'', m')_{11} = 1''928919(0, 2853139)$
$(m', m''')_{12} = -0''074181(\bar{2}, 8702961)$	$(m'', m')_{12} = -0''340953(\bar{1}, 5326942)$
$(m', m''')_{13} = -0''120108(\bar{1}, 0795734)$	$(m'', m')_{13} = -0''552041(\bar{1}, 7419715)$
$(m', m''')_{14} = 0''660507(\bar{1}, 8198774)$	$(m'', m')_{14} = 0''035816(0, 4822765)$
$(m', m''')_{15} = -0''094593(\bar{2}, 9758625)$	$(m'', m')_{15} = -0''434771(\bar{1}, 6382606)$
$(m', m''')_{16} = 0''248842(\bar{1}, 3959233)$	$(m'', m')_{16} = 1''143724(0, 0583214)$

Венера и Юпитеръ.

$(m', m'') = 4''194346(0, 6226643)$	$(m'', m') = 0''004068(\bar{3}, 6113432)$
$[m', m''] = 0''727110(\bar{1}, 8616002)$	$[m'', m'] = 0''000708(\bar{4}, 8502791)$
$(m', m'')_1 = -0''126447(\bar{1}, 1019095)$	$(m'', m')_1 = -0''000123(\bar{4}, 0905884)$
$(m', m'')_2 = -1''070474(0, 0295762)$	$(m'', m')_2 = -0''001042(\bar{3}, 0182551)$
$(m', m'')_3 = 1''246856(0, 0958165)$	$(m'', m')_3 = 0''001214(\bar{3}, 0844954)$
$(m', m'')_4 = 6''716933(0, 8271711)$	$(m'', m')_4 = 0''006544(\bar{3}, 8158500)$
$(m', m'')_5 = -15''167687(1, 1809194)$	$(m'', m')_5 = -0''014777(\bar{2}, 1695983)$
$(m', m'')_6 = 7''288852(0, 8626591)$	$(m'', m')_6 = 0''007101(\bar{3}, 8513380)$
$(m', m'')_7 = -0''671993(\bar{1}, 8273647)$	$(m'', m')_7 = -0''000655(\bar{4}, 8160436)$
$(m', m'')_8 = 1''215607(0, 0847931)$	$(m'', m')_8 = 0''001184(\bar{3}, 0734720)$
$(m', m'')_9 = -5''306148(0, 7247796)$	$(m'', m')_9 = -0''005169(\bar{3}, 7134583)$
$(m', m'')_{10} = 19''389775(1, 2875729)$	$(m'', m')_{10} = 0''018890(\bar{2}, 2762518)$
$(m', m'')_{11} = 22''091391(1, 3442231)$	$(m'', m')_{11} = 0''021523(\bar{2}, 3329020)$
$(m', m'')_{12} = -0''463546(\bar{1}, 6660927)$	$(m'', m')_{12} = -0''000425(\bar{4}, 6547716)$
$(m', m'')_{13} = -3''250314(0, 5119252)$	$(m'', m')_{13} = -0''003166(\bar{3}, 5006041)$

$$(m', m'')_{14} = 7''.666607(0,8846032)$$

$$(m', m'')_{15} = -15''.144152(1,1802450)$$

$$(m', m'')_{16} = 16''.110459(1,2071079)$$

$$(m'', m')_{14} = 0''.007469(\bar{3},8732821)$$

$$(m'', m')_{15} = -0''.014750(\bar{2},1689239)$$

$$(m'', m')_{16} = 0''.014754(\bar{2},1689239)$$

Венера и Сатурнъ.

$$(m', m') = 0''.198298(\bar{1},2973190)$$

$$[m', m'] = 0''.018781(\bar{2},2737066)$$

$$(m', m')_1 = -0''.001730(\bar{3},2381026)$$

$$(m', m')_2 = -0''.049866(\bar{2},6978063)$$

$$(m', m')_3 = 0''.052280(\bar{2},7183429)$$

$$(m', m')_4 = 0''.303281(\bar{1},4818460)$$

$$(m', m')_5 = -1''.309457(0,1170915)$$

$$(m'', m')_6 = 1''.295050(0,1122861)$$

$$(m', m')_7 = -0''.017036(\bar{2},2313820)$$

$$(m', m')_8 = 0''.030444(\bar{2},4835117)$$

$$(m', m')_9 = -0''.248738(\bar{1},3957421)$$

$$(m', m')_{10} = 1''.724604(0,2366895)$$

$$(m', m')_{11} = 1''.792852(0,2535446)$$

$$(m', m')_{12} = -0''.011474(\bar{2},0597210)$$

$$(m', m')_{13} = -0''.150162(\bar{1},1765609)$$

$$(u', m')_{14} = 0''.351517(\bar{1},5459459)$$

$$(m', m')_{15} = -1''.309457(0,1170915)$$

$$(m', m')_{16} = 1''.333206(0,1248975)$$

$$(m', m') = 0''.000477(\bar{4},6787335)$$

$$[m', m'] = 0''.000045(\bar{5},6551211)$$

$$(m', m')_1 = -0''.000004(\bar{6},6195171)$$

$$(m', m')_2 = -0''.000120(\bar{4},0792214)$$

$$(m', m')_3 = 0''.000126(\bar{4},0997574)$$

$$(m', m')_4 = 0''.000730(\bar{4},8632605)$$

$$(m', m')_5 = -0''.003151(\bar{3},4985060)$$

$$(m', m')_6 = 0''.003116(\bar{3},4937012)$$

$$(m', m')_7 = -0''.000041(\bar{5},6127965)$$

$$(m', m')_8 = 0''.000073(\bar{5},8649262)$$

$$(m', m')_9 = -0''.000599(\bar{4},7771566)$$

$$(m', m')_{10} = 0''.004150(\bar{3},6181040)$$

$$(m', m')_{11} = 0''.004314(\bar{3},6349591)$$

$$(m', m')_{12} = -0''.000028(\bar{5},4411355)$$

$$(m', m')_{13} = -0''.000361(\bar{4},5579754)$$

$$(m', m')_{14} = 0''.000754(\bar{4},8773604)$$

$$(m', m')_{15} = -0''.003151(\bar{3},4985060)$$

$$(m', m')_{16} = 0''.003208(\bar{3},5063120)$$

Венера и Уранъ.

$$(m', m'') = 0''.004740(\bar{3},6758122)$$

$$[m', m''] = 0''.000228(\bar{4},3580817)$$

$$(m', m'')_1 = -0''.000010(\bar{5},0059940)$$

$$(m', m'')_2 = -0''.001186(\bar{3},0743727)$$

$$(m', m'')_3 = 0''.001201(\bar{3},0795117)$$

$$(m', m'')_4 = 0''.007144(\bar{3},8539788)$$

$$(m', m'')_5 = -0''.062879(\bar{2},7985106)$$

$$(m'', m') = 0''.000041(\bar{5},6132546)$$

$$[m'', m'] = 0''.000002(\bar{6},2955241)$$

$$(m'', m')_1 = -0''.000000(\bar{8},9434364)$$

$$(m'', m')_2 = -0''.000010(\bar{5},0118151)$$

$$(m'', m')_3 = 0''.000010(\bar{5},0169541)$$

$$(m'', m')_4 = 0''.000062(\bar{5},7914212)$$

$$(m'', m')_5 = -0''.000544(\bar{4},7359530)$$

$$(m', m'')_6 = 0,062421(\bar{2},7953363)$$

$$(m', m'')_7 = -0,000201(\bar{4},3041478)$$

$$(m', m'')_8 = 0,000358(\bar{4},5545736)$$

$$(m', m'')_9 = -0,005930(\bar{3},7730935)$$

$$(m', m'')_{10} = 0,083584(\bar{2},9221259)$$

$$(m', m'')_{11} = 0,084390(\bar{2},9262937)$$

$$(m', m'')_{12} = -0,000135(\bar{4},1291536)$$

$$(m', m'')_{13} = -0,003564(\bar{3},5519038)$$

$$(m', m'')_{14} = 0,008322(\bar{3},9202205)$$

$$(m', m'')_{15} = -0,062879(\bar{2},7985071)$$

$$(m', m'')_{16} = 0,063155(\bar{2},8004112)$$

$$(m'', m')_6 = 0,000540(\bar{4},7327787)$$

$$(m'', m')_7 = -0,000002(\bar{6},2415902)$$

$$(m'', m')_8 = 0,000003(\bar{6},4920160)$$

$$(m'', m')_9 = -0,000051(\bar{5},7105359)$$

$$(m'', m')_{10} = 0,000724(\bar{4},8595683)$$

$$(m'', m')_{11} = 0,000731(\bar{4},8637361)$$

$$(m'', m')_{12} = -0,000001(\bar{6},0665960)$$

$$(m'', m')_{13} = -0,000031(\bar{5},4893462)$$

$$(m'', m')_{14} = 0,000072(\bar{5},8576629)$$

$$(m'', m')_{15} = -0,000544(\bar{4},7359495)$$

$$(m'', m')_{16} = 0,000547(\bar{4},7378536)$$

Земля и Марсъ.

$$(m'', m''') = 0,298197(\bar{1},4745038)$$

$$[m'', m'''] = 0,229303(\bar{1},3604182)$$

$$(m'', m''')_1 = -0,594519(\bar{1},7741658)$$

$$(m'', m''')_2 = -0,258995(\bar{1},4132915)$$

$$(m'', m''')_3 = 1,088418(0,0367958)$$

$$(m'', m''')_4 = 2,327056(0,3668069)$$

$$(m'', m''')_5 = -0,465245(\bar{1},6676821)$$

$$(m'', m''')_6 = -0,597217(\bar{1},7761325)$$

$$(m'', m''')_7 = -0,507812(\bar{1},7057030)$$

$$(m'', m''')_8 = 1,270019(0,1038100)$$

$$(m'', m''')_9 = -0,670006(\bar{1},8260786)$$

$$(m'', m''')_{10} = 0,104120(\bar{1},0175352)$$

$$(m'', m''')_{11} = 2,491864(0,3965244)$$

$$(m'', m''')_{12} = -0,648023(\bar{1},8115908)$$

$$(m'', m''')_{13} = -0,633721(\bar{1},8018984)$$

$$(m'', m''')_{14} = 1,780798(0,2506143)$$

$$(m'', m''')_{15} = -0,001022(\bar{3},0095675)$$

$$(m'', m''')_{16} = 1,335167(0,1255359)$$

$$(m'', m'') = 1,802212(0,2558058)$$

$$[m'', m''] = 1,385862(0,1417202)$$

$$(m'', m'')_1 = -3,593087(0,5554678)$$

$$(m'', m'')_2 = -1,565285(0,1945935)$$

$$(m'', m'')_3 = 6,578059(0,8180978)$$

$$(m'', m'')_4 = 14,064000(1,1481089)$$

$$(m'', m'')_5 = -2,811800(0,4489841)$$

$$(m'', m'')_6 = -3,609396(0,5574345)$$

$$(m'', m'')_7 = -3,069057(0,4870050)$$

$$(m'', m'')_8 = 7,675600(0,8851120)$$

$$(m'', m'')_9 = -4,049305(0,6073806)$$

$$(m'', m'')_{10} = 0,629270(\bar{1},7988374)$$

$$(m'', m'')_{11} = 15,060050(1,1778264)$$

$$(m'', m'')_{12} = -3,916452(0,5928928)$$

$$(m'', m'')_{13} = -3,830014(0,5832004)$$

$$(m'', m'')_{14} = 10,762589(1,0319168)$$

$$(m'', m'')_{15} = -0,006178(\bar{3},7908695)$$

$$(m'', m'')_{16} = 8,0693376(0,9068379)$$

Земля и Юпитеръ.

$(m'', m'') = 7,053983(0,8484345)$	$(m'', m'') = 0,009036(\bar{3},9560178)$
$[m'', m''] = 1,686882(0,2270848)$	$[m'', m''] = 0,002161(\bar{3},3346681)$
$(m'', m'')_1 = -0,421451(\bar{1},6247473)$	$(m'', m'')_1 = -0,000540(\bar{4},7323306)$
$(m'', m'')_2 = -1,838929(0,2645649)$	$(m'', m'')_2 = -0,002355(\bar{3},3721482)$
$(m'', m'')_3 = 2,426488(0,3849783)$	$(m'', m'')_3 = 0,003108(\bar{3},4925616)$
$(m'', m'')_4 = 11,994905(1,0789975)$	$(m'', m'')_4 = 0,015366(\bar{2},1865808)$
$(m'', m'')_5 = -18,566713(1,2687350)$	$(m'', m'')_5 = -0,023785(\bar{2},3763183)$
$(m'', m'')_6 = 1,709681(0,2329153)$	$(m'', m'')_6 = 0,002190(\bar{3},3404986)$
$(m'', m'')_7 = -1,598289(0,2036553)$	$(m'', m'')_7 = -0,002047(\bar{3},3112386)$
$(m'', m'')_8 = 2,937075(0,4679150)$	$(m'', m'')_8 = 0,003762(\bar{3},5754983)$
$(m'', m'')_9 = -4,514102(0,6545714)$	$(m'', m'')_9 = -0,005783(\bar{3},7621547)$
$(m'', m'')_{10} = 22,798390(1,3579041)$	$(m'', m'')_{10} = 0,029207(\bar{2},4654874)$
$(m'', m'')_{11} = 29,255233(1,4662036)$	$(m'', m'')_{11} = 0,037478(\bar{2},5737869)$
$(m'', m'')_{12} = -1,136865(0,0557091)$	$(m'', m'')_{12} = -0,001456(\bar{3},1632924)$
$(m'', m'')_{13} = -5,636508(0,7510101)$	$(m'', m'')_{13} = -0,007221(\bar{3},8585934)$
$(m'', m'')_{14} = 13,424298(1,1278916)$	$(m'', m'')_{14} = 0,017197(\bar{2},2354749)$
$(m'', m'')_{15} = -18,459704(1,2662248)$	$(m'', m'')_{15} = -0,023648(\bar{2},3738081)$
$(m'', m'')_{16} = 20,829743(1,3186839)$	$(m'', m'')_{16} = 0,026685(\bar{2},4262672)$

Земля и Сатурнъ.

$(m'', m'') = 0,325549(\bar{1},5126168)$	$(m'', m'') = 0,001030(\bar{3},0129357)$
$[m'', m''] = 0,042607(\bar{2},6294821)$	$[m'', m''] = 0,000135(\bar{4},1297010)$
$(m'', m'')_1 = -0,054867(\bar{2},7393144)$	$(m'', m'')_1 = -0,000174(\bar{4},2396333)$
$(m'', m'')_2 = -0,082322(\bar{2},9155150)$	$(m'', m'')_2 = -0,000260(\bar{4},4158339)$
$(m'', m'')_3 = 0,090079(\bar{2},9546239)$	$(m'', m'')_3 = 0,000285(\bar{4},4549428)$
$(m'', m'')_4 = 0,506808(\bar{1},7048437)$	$(m'', m'')_4 = 0,001603(\bar{3},2051624)$
$(m'', m'')_5 = -1,557284(0,1923679)$	$(m'', m'')_5 = -0,004928(\bar{3},6926868)$
$(m'', m'')_6 = 1,523869(0,1829477)$	$(m'', m'')_6 = 0,004822(\bar{3},6832666)$
$(m'', m'')_7 = -0,038919(\bar{2},5901675)$	$(m'', m'')_7 = -0,000123(\bar{4},0904864)$
$(m'', m'')_8 = 0,069878(\bar{2},8443445)$	$(m'', m'')_8 = 0,000221(\bar{4},3446634)$
$(m'', m'')_9 = -0,409680(\bar{1},6124451)$	$(m'', m'')_9 = -0,001296(\bar{3},1127640)$

$$(m'', m')_{10} = 2,027779(0,3070207)$$

$$(u'', m')_{11} = 2,163901(0,3392329)$$

$$(m'', m')_{12} = -0,023852(\bar{2},3775275)$$

$$(m'', m')_{13} = -0,248714(\bar{1},3957003)$$

$$(m'', m')_{14} = 0,583930(\bar{1},7663611)$$

$$(m'', m')_{15} = -1,556518(0,1921543)$$

$$(m'', m')_{16} = 1,611648(0,2072704)$$

$$(m', m'')_{10} = 0,006417(\bar{3},8073396)$$

$$(m', m'')_{11} = 0,006911(\bar{3},8395518)$$

$$(m', m'')_{12} = -0,000075(\bar{5},8778464)$$

$$(m', m'')_{13} = -0,000787(\bar{4},8960192)$$

$$(m', m'')_{14} = 0,001847(\bar{3},2666800)$$

$$(m', m'')_{15} = -0,004925(\bar{3},6924732)$$

$$(m', m'')_{16} = 0,005100(\bar{3},7075893)$$

Земля и Уранъ.

$$(m'', m'') = 0,007724(\bar{3},8878534)$$

$$[m'', m''] = 0,000503(\bar{4},7017952)$$

$$(m'', m'')_1 = -0,000032(\bar{5},004868)$$

$$(m'', m'')_2 = -0,001936(\bar{3},2869816)$$

$$(m'', m'')_3 = 0,001980(\bar{3},2967725)$$

$$(m'', m'')_4 = 0,011693(\bar{2},0679286)$$

$$(m'', m'')_5 = -0,074136(\bar{2},8700301)$$

$$(m'', m'')_6 = 0,073755(\bar{2},8677939)$$

$$(m'', m'')_7 = -0,000454(\bar{4},6575424)$$

$$(m'', m'')_8 = 0,000810(\bar{4},9084835)$$

$$(m'', m'')_9 = -0,009671(\bar{3},9854757)$$

$$(m'', m'')_{10} = 0,098278(\bar{2},9924569)$$

$$(m'', m'')_{11} = 0,100097(\bar{1},0004225)$$

$$(m'', m'')_{12} = -0,000304(\bar{4},4835456)$$

$$(m'', m'')_{13} = -0,005819(\bar{3},7648854)$$

$$(m'', m'')_{14} = 0,013599(\bar{2},1335286)$$

$$(m'', m'')_{15} = -0,074134(\bar{2},8700219)$$

$$(m'', m'')_{16} = 0,074769(\bar{2},8737210)$$

$$(m', m'') = 0,000088(\bar{5},9442001)$$

$$[m', m''] = 0,000006(\bar{6},7581419)$$

$$(m', m'')_1 = -0,000000(\bar{7},5568335)$$

$$(m', m'')_2 = -0,000022(\bar{5},3433283)$$

$$(m', m'')_3 = 0,000022(\bar{5},3531192)$$

$$(m', m'')_4 = 0,000133(\bar{4},1242753)$$

$$(m', m'')_5 = -0,000844(\bar{4},9263768)$$

$$(m', m'')_6 = 0,000839(\bar{4},9241406)$$

$$(m', m'')_7 = -0,000005(\bar{6},7138891)$$

$$(m', m'')_8 = 0,000009(\bar{6},9648302)$$

$$(m', m'')_9 = -0,000110(\bar{4},0418224)$$

$$(m', m'')_{10} = 0,001118(\bar{3},0488036)$$

$$(m', m'')_{11} = 0,001139(\bar{3},0567692)$$

$$(m', m'')_{12} = -0,000003(\bar{6},5398923)$$

$$(m', m'')_{13} = -0,000066(\bar{5},8212321)$$

$$(m', m'')_{14} = 0,000155(\bar{4},1898753)$$

$$(m', m'')_{15} = -0,000844(\bar{4},9263686)$$

$$(m', m'')_{16} = 0,000851(\bar{4},9300677)$$

Марсъ и Юпитеръ.

$$(m'', m'') = 14,630410(1,1652565)$$

$$[m'', m''] = 5,296811(0,7240145)$$

$$(m'', m'')_1 = -2,251927(0,3525543)$$

$$(m', m'') = 0,003101(\bar{3},4915378)$$

$$[m', m''] = 0,001122(\bar{3},0502958)$$

$$(m', m'')_1 = -0,000477(\bar{4},6788356)$$

$(m''', m'')_2 = -4,097301(0,6124974)$	$(m'', m''')_2 = -0,000868(\bar{4},9387792)$
$(m''', m'')_3 = 7,232686(0,8592996)$	$(m'', m''')_3 = 0,001533(\bar{3},1855815)$
$(m''', m'')_4 = 29,442007(1,4689674)$	$(m'', m''')_4 = 0,006241(\bar{3},7952487)$
$(m''', m'')_5 = -25,894090(1,4132006)$	$(m'', m''')_5 = -0,005489(\bar{3},7394819)$
$(m''', m'')_6 = 20,275414(1,3069698)$	$(m'', m''')_6 = 0,004298(\bar{3},6332511)$
$(m''', m'')_7 = -5,401221(0,7324920)$	$(m'', m''')_7 = -0,001145(\bar{3},0587739)$
$(m''', m'')_8 = 10,361345(1,0154162)$	$(m'', m''')_8 = 0,002196(\bar{3},3416975)$
$(m''', m'')_9 = -19,413980(1,2881147)$	$(m'', m''')_9 = -0,004115(\bar{3},6143966)$
$(m''', m'')_{10} = 28,141819(1,4493522)$	$(m'', m''')_{10} = 0,005965(\bar{3},7756335)$
$(m''', m'')_{11} = 50,278080(1,7013787)$	$(m'', m''')_{11} = 0,010657(\bar{2},0276606)$
$(m''', m'')_{12} = -4,174465(0,6206009)$	$(m'', m''')_{12} = -0,000885(\bar{4},9468822)$
$(m''', m'')_{13} = -19,350926(1,2867010)$	$(m'', m''')_{13} = -0,004101(\bar{3},6129823)$
$(m''', m'')_{14} = 31,248093(1,4948235)$	$(m'', m''')_{14} = 0,006623(\bar{3},8211048)$
$(m''', m'')_{15} = -25,033617(1,3985236)$	$(m'', m''')_{15} = -0,005306(\bar{3},7248049)$
$(m''', m'')_{16} = 33,737900(1,5281181)$	$(m'', m''')_{16} = 0,007151(\bar{3},8543994)$

Марсъ и Сатурнъ.

$(m''', m') = 0,629533(\bar{1},7990188)$	$(m', m''') = 0,000330(\bar{4},5180358)$
$[m''', m'] = 0,125294(\bar{1},0979308)$	$[m', m'''] = 0,000066(\bar{5},8169478)$
$(m''', m')_1 = -0,025372(\bar{2},4043616)$	$(m', m''')_1 = -0,000013(\bar{5},1233786)$
$(m''', m')_2 = -0,161827(\bar{1},2090531)$	$(m', m''')_2 = -0,000085(\bar{5},9280701)$
$(m''', m')_3 = 0,197215(\bar{1},2949401)$	$(m', m''')_3 = 0,000103(\bar{4},0139571)$
$(m''', m')_4 = 1,029578(0,0126590)$	$(m', m''')_4 = 0,000539(\bar{4},7316764)$
$(m''', m')_5 = -1,985475(0,2978645)$	$(m', m''')_5 = -0,001039(\bar{3},0168815)$
$(m''', m')_6 = 1,881232(0,2744425)$	$(m', m''')_6 = 0,000985(\bar{4},9934595)$
$(m''', m')_7 = -0,116800(\bar{1},0674447)$	$(m', m''')_7 = -0,000061(\bar{5},7864617)$
$(m''', m')_8 = 0,212460(\bar{1},3272780)$	$(m', m''')_8 = 0,000111(\bar{4},0462955)$
$(m''', m')_9 = -0,799601(\bar{1},9028735)$	$(m', m''')_9 = -0,000419(\bar{4},6218905)$
$(m''', m')_{10} = 2,503046(0,3984688)$	$(m', m''')_{10} = 0,001310(\bar{3},1174858)$
$(m''', m')_{11} = 2,973409(0,4732546)$	$(m', m''')_{11} = 0,001556(\bar{3},1922716)$
$(m''', m')_{12} = -0,081446(\bar{2},9108726)$	$(m', m''')_{12} = -0,000043(\bar{5},6298896)$
$(m''', m')_{13} = -0,493077(\bar{1},6929153)$	$(m', m''')_{13} = -0,000258(\bar{4},4119323)$

$$\begin{aligned}
 (m''m'')_{14} &= 1,167020(0,0670784) & (m''m''')_{14} &= 0,000611(\bar{4},7860954) \\
 (m''m'')_{15} &= -1,980107(0,2966887) & (m''m''')_{15} &= -0,001036(\bar{3},0157057) \\
 (m''m'')_{16} &= 2,149873(0,3324129) & (m''m''')_{16} &= 0,001125(\bar{3},0514299)
 \end{aligned}$$

Марсъ и Уранъ.

$$\begin{aligned}
 (m''m'') &= 0,014626(\bar{2},1651374) & (m''m''') &= 0,000028(\bar{5},4401822) \\
 [m''m''] &= 0,001451(\bar{3},1616650) & [m''m'''] &= 0,000003(\bar{6},4367098) \\
 (m''m'')_1 &= -0,000140(\bar{4},1466992) & (m''m''')_1 &= -0,000000(\bar{7},4217440) \\
 (m''m'')_2 &= -0,003680(\bar{3},5658782) & (m''m''')_2 &= -0,000007(\bar{6},8409230) \\
 (m''m'')_3 &= 0,003876(\bar{3},5883708) & (m''m''')_3 &= 0,000007(\bar{6},8634156) \\
 (m''m'')_4 &= 0,022412(\bar{2},3504851) & (m''m''')_4 &= 0,000042(\bar{5},6255299) \\
 (m''m'')_5 &= -0,092224(\bar{2},9648471) & (m''m''')_5 &= -0,000174(\bar{4},2398919) \\
 (m''m'')_6 &= 0,091105(\bar{2},9595454) & (m''m''')_6 &= 0,000172(\bar{4},2345902) \\
 (m''m'')_7 &= -0,001317(\bar{3},1196453) & (m''m''')_7 &= -0,000002(\bar{6},3946901) \\
 (m''m'')_8 &= 0,002355(\bar{3},3719936) & (m''m''')_8 &= 0,000004(\bar{6},6470384) \\
 (m''m'')_9 &= -0,018353(\bar{2},2637092) & (m''m''')_9 &= -0,000034(\bar{5},5387540) \\
 (m''m'')_{10} &= 0,121312(\bar{1},0839050) & (m''m''')_{10} &= 0,000228(\bar{4},3589498) \\
 (m''m'')_{11} &= 0,126589(\bar{1},1023980) & (m''m''')_{11} &= 0,000238(\bar{4},3774428) \\
 (m''m'')_{12} &= -0,888002(\bar{1},9484140) & (m''m''')_{12} &= -0,001672(\bar{3},2234588) \\
 (m''m'')_{13} &= -0,011086(\bar{2},0447876) & (m''m''')_{13} &= -0,000021(\bar{5},3198324) \\
 (m''m'')_{14} &= 0,025960(\bar{2},2143091) & (m''m''')_{14} &= 0,000031(\bar{5},4893539) \\
 (m''m'')_{15} &= -0,092207(\bar{2},9647659) & (m''m''')_{15} &= -0,000174(\bar{4},2398107) \\
 (m''m'')_{16} &= 0,094057(\bar{2},9733945) & (m''m''')_{16} &= 0,000177(\bar{4},2484393)
 \end{aligned}$$

Юпитеръ и Сатурнъ.

$$\begin{aligned}
 (m''m'') &= 7,374475(0,8677311) & (m''m'') &= 18,216571(1,2604667) \\
 [m''m''] &= 4,821087(0,6831450) & [m''m''] &= 11,909144(1,0758806) \\
 (m''m'')_1 &= -6,668167(0,8240064) & (m''m'')_1 &= -16,471803(1,2167421) \\
 (m''m'')_2 &= -3,616230(0,5582560) & (m''m'')_2 &= -8,932882(0,9509916) \\
 (m''m'')_3 &= 12,889503(1,1101839) & (m''m'')_3 &= 31,836072(1,5029195) \\
 (m''m'')_4 &= 32,549260(1,5125412) & (m''m'')_4 &= 80,403837(1,9052768) \\
 (m''m'')_5 &= -9,294420(0,9682223) & (m''m'')_5 &= -22,979258(1,3609579)
 \end{aligned}$$

$(m, m')_6 = -29,126620(1,4642901)$	$(m, m')_6 = -71,949149(1,8570257)$
$(m, m')_7 = -7,408185(0,8697118)$	$(m, m')_7 = -18,299842(1,2624474)$
$(m, m')_8 = 16,886915(1,2275504)$	$(m, m')_8 = 41,714400(1,6202860)$
$(m, m')_9 = -12,552200(1,0987198)$	$(m, m')_9 = -31,006685(1,4914554)$
$(m, m')_{10} = 4,627492(0,6653457)$	$(m, m')_{10} = 11,430921(1,0580813)$
$(m, m')_{11} = 37,453734(1,5734951)$	$(m, m')_{11} = 92,519000(1,9662307)$
$(m, m')_{12} = -7,931250(0,8993417)$	$(m, m')_{12} = -19,591481(1,2920773)$
$(m, m')_{13} = -10,426402(1,0181345)$	$(m, m')_{13} = -25,755500(1,4108701)$
$(m, m')_{14} = 28,023412(1,4475210)$	$(m, m')_{14} = 69,224000(1,8402566)$
$(m, m')_{15} = -4,805708(0,6817574)$	$(m, m')_{15} = -11,871154(1,0744930)$
$(m, m')_{16} = 21,248883(1,3273362)$	$(m, m')_{16} = 52,489423(1,7200718)$

Юпитеръ и Уранъ.

$(m, m') = 0,105321(\bar{1},0225172)$	$(m, m') = 0,936010(\bar{1},9712806)$
$[m, m'] = 0,035371(\bar{2},5486510)$	$[m, m'] = 0,314350(\bar{1},4974144)$
$(m, m')_1 = -0,013540(\bar{2},1316286)$	$(m, m')_1 = -0,120335(\bar{1},0803920)$
$(m, m')_2 = -0,028919(\bar{2},4611850)$	$(m, m')_2 = -0,257009(\bar{1},4099484)$
$(m, m')_3 = 0,047777(\bar{2},6792183)$	$(m, m')_3 = 0,424601(\bar{1},6279817)$
$(m, m')_4 = 0,203144(\bar{1},3078035)$	$(m, m')_4 = 1,805372(0,2565669)$
$(m, m')_5 = -0,199852(\bar{1},3007097)$	$(m, m')_5 = -1,776123(0,2494731)$
$(m, m')_6 = 0,082063(\bar{2},9141507)$	$(m, m')_6 = 0,729313(\bar{1},8629141)$
$(m, m')_7 = -0,035390(\bar{2},5488851)$	$(m, m')_7 = -0,314520(\bar{1},4976485)$
$(m, m')_8 = 0,067170(\bar{2},8271803)$	$(m, m')_8 = 0,596958(\bar{1},7759437)$
$(m, m')_9 = -0,138422(\bar{1},1412051)$	$(m, m')_9 = -1,230179(0,0899685)$
$(m, m')_{10} = 0,224275(\bar{1},3507812)$	$(m, m')_{10} = 1,993171(0,2995446)$
$(m, m')_{11} = 0,368777(\bar{1},5667646)$	$(m, m')_{11} = 3,277389(0,5155280)$
$(m, m')_{12} = -0,026797(\bar{2},4280993)$	$(m, m')_{12} = -0,238156(\bar{1},3768621)$
$(m, m')_{13} = -0,089942(\bar{2},9539660)$	$(m, m')_{13} = -0,799336(\bar{1},9027294)$
$(m, m')_{14} = 0,218440(\bar{1},3393327)$	$(m, m')_{14} = 1,941315(0,2880961)$
$(m, m')_{15} = -0,195044(\bar{1},2901335)$	$(m, m')_{15} = -1,733392(0,2388969)$
$(m, m')_{16} = 0,250922(\bar{1},3995394)$	$(m, m')_{16} = 2,229989(0,3483028)$

Сатурнъ и Уранъ.

$(m, m'') = 0,386869(\bar{1},5875639)$	$(m''m') = 1,391847(0,1435917)$
$[m, m''] = 0,232399(\bar{1},3662336)$	$[m''m'] = 0,836106(\bar{1},9222614)$
$(m, m'')_1 = -0,253249(\bar{1},4035483)$	$(m''m')_1 = -0,911111(\bar{1},9595761)$
$(m, m'')_2 = -0,159799(\bar{1},2035748)$	$(m''m')_2 = -0,574913(\bar{1},7596026)$
$(m, m'')_3 = 0,511797(\bar{1},7090977)$	$(m''m')_3 = 1,841303(0,2651255)$
$(m, m'')_4 = 1,402507(0,1469051)$	$(m''m')_4 = 5,045833(0,7029329)$
$(m, m'')_5 = -0,483911(\bar{1},6847654)$	$(m''m')_5 = -1,740977(0,2407932)$
$(m, m'')_6 = 0,008231(\bar{3},9154604)$	$(m''m')_6 = 0,029613(\bar{2},4714882)$
$(m, m'')_7 = -0,318885(\bar{1},5036341)$	$(m''m')_7 = -1,147260(0,0596619)$
$(m, m'')_8 = 0,699449(\bar{1},8447563)$	$(m''m')_8 = 2,516425(0,4007841)$
$(m, m'')_9 = -0,610210(\bar{1},7854798)$	$(m''m')_9 = -2,195369(0,3415076)$
$(m, m'')_{10} = 0,303575(\bar{1},4822661)$	$(m''m')_{10} = 1,092179(0,0382939)$
$(m, m'')_{11} = 1,687754(0,2273092)$	$(m''m')_{11} = 6,072073(0,7833370)$
$(m, m'')_{12} = -0,317609(\bar{1},5018128)$	$(m''m')_{12} = -1,142669(0,0579206)$
$(m, m'')_{13} = -0,480319(\bar{1},6815299)$	$(m''m')_{13} = -1,728055(0,2375577)$
$(m, m'')_{14} = 1,265531(0,1022729)$	$(m''m')_{14} = 4,553031(0,6583007)$
$(m, m'')_{15} = -0,326382(\bar{1},5137268)$	$(m''m')_{15} = -1,1742338(0,0697546)$
$(m, m'')_{16} = 0,986239(\bar{1},9939823)$	$(m''m')_{16} = 3,548216(0,5500101)$

(18). Теперь можно уже вычислить члены, составляющіе выраженія $\frac{dh}{dt}$, $\frac{dh'}{dt}$, и пр. именно:

Меркурій и Венера:

$$\begin{aligned}
 (m, m')l &= 0,161576, & [m, m']l' &= -0,008026, \\
 (m, m')_1[l'^2 + h'^2 - (q' - q)^2 - (p' - p)^2] &= 0,000786(\bar{4},8953210), \\
 (m, m')_4[l'^2 + h'^2 - (q' - q)^2 - (p' - p)^2] &= -0,003934(\bar{3},5947903), \\
 (m, m')_2l^2(l^2 + h^2) &= -0,003218(\bar{3},5076301), & (m, m')_3l(l^2 + h^2) &= 0,022460(\bar{2},3514100), \\
 (m, m')_5[2l(l'l' + hh') + l'(l^2 + h^2)] &= 0,000328(\bar{4},5163967) \\
 (m, m')_6[2l(l'l' + hh') + l'(l^2 + h^2)] &= 0,000078(\bar{5},8919361) \\
 (m, m')_7l'(l'^2 + h'^2) &= 0,000006(\bar{6},7518800), & (m, m')_8l'(l'^2 + h'^2) &= -0,000018(\bar{5},1060920) \\
 (m, m')_9[l(l'^2 - h'^2) + 2l'h'h] &= 0,000044(\bar{5},6460921), \\
 \frac{1}{2}(m, m')_4[l(l'^2 - h'^2) + 2l'h'h] &= 0,000056(\bar{5},7474912) \\
 (m, m')_{10}[l'(p' - p)^2 - h'(q'(p' - p) - p(q' - q))] &= -0,000065(\bar{5},8142204),
 \end{aligned}$$

$$\begin{aligned}
(m, m')_{11} [l'(p' - p)^2 - h'(q'(p' - p) - p(q' - q))] &= -0,000371 (\bar{4}, 5692724), \\
(m, m')_{12} [l'(p' - p)^2 - h'(q'(p' - p) - p(q' - q))] &= 0,000077 (\bar{5}, 8849126), \\
(m, m')_{13} [l((q' - q)^2 - (p' - p)^2) + 2h(p' - p)(q' - q)] &= -0,004306 (\bar{3}, 6340579), \\
(m, m')_{14} [l((q' - q)^2 - (p' - p)^2) + 2h(p' - p)(q' - q)] &= 0,011523 (\bar{2}, 0615975), \\
(m, m')_{15} [l'((q' - q)^2 + (p' - p)^2) + 2h'(qp' - q'p)] &= -0,000026 (\bar{5}, 4198092), \\
(m, m')_{16} [l'((q' - p)^2 + (p' - p)^2) + 2h'(qp' - q'p)] &= 0,000106 (\bar{4}, 0247316), \\
\frac{1}{2}(m, m') l(l^2 + h^2) &= 0,003415 (\bar{3}, 5334503), \quad \frac{1}{2}[m, m'] l'(l^2 + h^2) = -0,000170 (\bar{4}, 2295940).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,169602,

« « « третьяго порядка = 0,004409.

Меркурій и Земля.

$$\begin{aligned}
(m, m'') l &= 0,046088, \quad [m, m''] l'' = -0,001163, \\
(m, m'')_1 l[l''^2 + h''^2 - (q'' - q)^2 - (p'' - p)^2] &= 0,000226 (\bar{4}, 3540052), \\
(m, m'')_4 l[l''^2 + h''^2 - (q'' - q)^2 - (p'' - p)^2] &= -0,003934 (\bar{3}, 5947903), \\
(m, m'')_2 l(l^2 + h^2) &= -0,000659 (\bar{4}, 8186362), \quad (m, m'')_3 l(l^2 + h^2) = 0,001556 (\bar{3}, 1920479), \\
(m, m'')_5 [2l(ll'' + hh'') + l''(l^2 + h^2)] &= -0,000286 (\bar{4}, 4570986), \\
(m, m'')_6 [2l(ll'' + hh'') + l''(l^2 + h^2)] &= 0,000154 (\bar{4}, 1876430), \\
(m, m'')_7 l''(l''^2 + h''^2) &= -0,000000 (\bar{7}, 5709005), \\
(m, m'')_8 l''(l''^2 + h''^2) &= -0,000000 (\bar{7}, 8776333), \\
(m, m'')_9 [l(l''^2 - h''^2) + 2l'h''h] &= 0,000041 (\bar{5}, 6128753), \\
\frac{1}{2}(m, m'')_4 [l(l''^2 - h''^2) + 2l'h''h] &= -0,000037 (\bar{5}, 5662511) \\
(m, m'')_{10} [l'(p'' - p)^2 - h''(q''(p'' - p) - p(q'' - q))] &= -0,000165 (\bar{4}, 2173077), \\
(m, m'')_{11} [l'(p'' - p)^2 - h''(q''(p'' - p) - p(q'' - q))] &= -0,000458 (\bar{4}, 6606574) \\
(m, m'')_{12} [l'(p'' - p)^2 - h''(q''(p'' - p) - p(q'' - q))] &= 0,000060 (\bar{5}, 7783768) \\
(m, m'')_{13} [l((q'' - q)^2 - (p'' - p)^2) + 2h(p'' - p)(q'' - q)] &= -0,002646 (\bar{3}, 4226081), \\
(m, m'')_{14} [l((q'' - q)^2 - (p'' - p)^2) + 2h(p'' - p)(q'' - q)] &= 0,006676 (\bar{3}, 8245319), \\
(m, m'')_{15} [l'((q'' - q)^2 + (p'' - p)^2) + 2h''(qp'' - q'p)] &= -0,000046 (\bar{5}, 6664899), \\
(m, m'')_{16} [l'((q'' - q)^2 + (p'' - p)^2) + 2h''(qp'' - q'p)] &= 0,000082 (\bar{5}, 3907941) \\
\frac{1}{2}(m, m'') l(l^2 + h^2) &= 0,001038 (\bar{3}, 0160495), \quad \frac{1}{2}[m, m''] l''(l^2 + h^2) = -0,000024 (\bar{5}, 3907941).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,047251,

« « « третьяго порядка = -0,004800.

Меркурій и Марсъ.

$$\begin{aligned}
 (m, m''') l &= 0,001553, & [m, m'''] l''' &= 0,000728, \\
 (m, m''')_1 l [l'''^2 + h'''^2 - (q''' - q)^2 - (p''' - p)^2] &= -0,000000 (\bar{8}, 8692159), \\
 (m, m''')_4 l [l'''^2 + h'''^2 - (q''' - q)^2 - (p''' - p)^2] &= 0,000001 (\bar{6}, 1585246), \\
 (m, m''')_2 l (l^2 + h^2) &= -0,000018 (\bar{5}, 2500929), & (m, m''')_3 l (l^2 + h^2) &= 0,000028 (\bar{5}, 4457397), \\
 (m, m''')_5 [2l (ll''' + hh''') + l''' (l^2 + h^2)] &= -0,000279 (\bar{4}, 4460535), \\
 (m, m''')_6 [2l (ll''' + hh''') + l''' (l^2 + h^2)] &= 0,000237 (\bar{4}, 3743694), \\
 (m, m''')_7 l''' (l'''^2 + h'''^2) &= -0,000006 (\bar{6}, 7952470), \\
 (m, m''')_8 l''' (l'''^2 + h'''^2) &= 0,000017 (\bar{5}, 0701073), \\
 (m, m''')_9 [l (l'''^2 - h'''^2) + 2l''' h''' h] &= 0,000062 (\bar{5}, 7899563), \\
 \frac{1}{2} (m, m''')_4 [l (l'''^2 - h'''^2) + 2l''' h''' h] &= 0,000044 (\bar{5}, 6449427) \\
 (m, m''')_{10} [l''' (p''' - p)^2 - h''' (q''' (p''' - p) - p (q''' - q))] &= 0,000010 (\bar{5}, 0101028), \\
 (m, m''')_{11} [l''' (p''' - p)^2 - h''' (q''' (p''' - p) - p (q''' - q))] &= 0,000016 (\bar{5}, 1995073), \\
 (m, m''')_{12} [l''' (p''' - p)^2 - h''' (q''' (p''' - p) - p (q''' - q))] &= -0,000001 (\bar{6}, 0106261), \\
 (m, m''')_{13} [l ((q''' - p)^2 - (p''' - p)^2) + 2h (p''' - p) (q''' - q)] &= -0,000038 (\bar{5}, 5790660), \\
 (m, m''')_{14} [l ((q''' - p)^2 - (p''' - p)^2) + 2h (p''' - p) (q''' - q)] &= 0,000092 (\bar{5}, 9636077), \\
 (m, m''')_{15} [l''' ((q''' - p)^2 + (p''' - p)^2) + 2h''' (qp''' - q''' p)] &= -0,000039 (\bar{5}, 5878399), \\
 (m, m''')_{16} [l''' ((q''' - p)^2 + (p''' - p)^2) + 2h''' (qp''' - q''' p)] &= 0,000048 (\bar{5}, 6827271), \\
 \frac{1}{2} (m, m''') l (l^2 + h^2) &= 0,000033 (\bar{5}, 5163844), & \frac{1}{2} [m, m'''] l''' (l^2 + h^2) &= 0,000015 (\bar{5}, 1871674).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000825,

α α α третьяго порядка = -0,000072.

Меркурій и Юпитеръ.

$$\begin{aligned}
 (m, m^{IV}) l &= 0,088808, & [m, m^{IV}] l^{IV} &= 0,007026, \\
 (m, m^{IV})_1 l [l^{IV2} + h^{IV2} - (q^{IV} - q)^2 - (p^{IV} - p)^2] &= 0,000009 (\bar{6}, 9468770), \\
 (m, m^{IV})_4 l [l^{IV2} + h^{IV2} - (q^{IV} - q)^2 - (p^{IV} - p)^2] &= -0,001611 (\bar{3}, 2070064), \\
 (m, m^{IV})_2 l (l^2 + h^2) &= -0,000944 (\bar{4}, 9749492), & (m, m^{IV})_3 l (l^2 + h^2) &= 0,000988 (\bar{4}, 9947315), \\
 (m, m^{IV})_5 [2l (ll^{IV} + hh^{IV}) + l^{IV} (l^2 + h^2)] &= -0,033587 (\bar{2}, 5261756), \\
 (m, m^{IV})_6 [2l (ll^{IV} + hh^{IV}) + h^{IV} (l^2 + h^2)] &= 0,033231 (\bar{2}, 2515499), \\
 (m, m^{IV})_7 l^{IV} (l^{IV2} + h^{IV2}) &= -0,000015 (\bar{5}, 1694658),
 \end{aligned}$$

$$\begin{aligned}
(m, m^{IV})_8 l^{IV} (l^{IV2} + h^{IV2}) &= 0,000026 (\bar{5}, 4215118), \\
(m, m^{IV})_9 [l(l^{IV2} - h^{IV2}) + 2l^{IV} h^{IV} h] &= -0,000588 (\bar{4}, 7692446), \\
\frac{1}{2} (m, m^{IV})_4 [l(l^{IV2} - h^{IV2}) + 2l^{IV} h^{IV} h] &= 0,000358 (\bar{4}, 5540605), \\
(m, m^{IV})_{10} [l^{IV} (p^{IV} - p)^2 - h^{IV} (q^{IV} (p^{IV} - p) - p (q^{IV} - q))] &= 0,001815 (\bar{3}, 2590246), \\
(m, m^{IV})_{11} [l^{IV} (p^{IV} - p)^2 - h^{IV} (q^{IV} (p^{IV} - p) - p (q^{IV} - q))] &= 0,001885 (\bar{3}, 2752505), \\
(m, m^{IV})_{12} [l^{IV} (p^{IV} - p)^2 - h^{IV} (q^{IV} (p^{IV} - p) - p (q^{IV} - q))] &= -0,000012 (\bar{5}, 0650852), \\
(m, m^{IV})_{13} [l((q^{IV} - q)^2 - (p^{IV} - p)^2) + 2h(p^{IV} - p)(q^{IV} - q)] &= -0,003030 (\bar{3}, 4813838), \\
(m, m^{IV})_{14} [l((q^{IV} - q)^2 - (p^{IV} - p)^2) + 2h(p^{IV} - p)(q^{IV} - q)] &= 0,007091 (\bar{3}, 8507153), \\
(m, m^{IV})_{15} [l^{IV} ((q^{IV} - q)^2 + (p^{IV} - p)^2) + 2h^{IV} (qp^{IV} - q^{IV} p)] &= -0,006630 (\bar{3}, 8215472), \\
(m, m^{IV})_{16} [l^{IV} ((q^{IV} - q)^2 + (p^{IV} - p)^2) + 2h^{IV} (qp^{IV} - q^{IV} p)] &= 0,006747 (\bar{3}, 8291109), \\
\frac{1}{2} (m, m^{IV}) l(l^2 + h^2) &= 0,001877 (\bar{3}, 2735281), \quad \frac{1}{2} [m, m^{IV}] l^{IV} (l^2 + h^2) = 0,000148 (\bar{4}, 1718122).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,081782,

“ “ “ третьяго порядка = -0,010934.

Меркурій и Сатурнъ.

$$\begin{aligned}
(m, m^V) l &= 0,004277, \quad (m, m^V) l^V = 0,000003, \\
(m, m^V)_4 l [l^{V2} + h^{V2} - (q^V - q)^2 - (p^V - p)^2] &= 0,000000 (\bar{7}, 0018407), \\
(m, m^V)_4 l [l^{V2} + h^{V2} - (q^V - q)^2 - (p^V - p)^2] &= -0,000010 (\bar{5}, 0122377), \\
(m, m^V)_2 l (l^2 + h^2) &= -0,000045 (\bar{5}, 6558965), \quad (m, m^V)_3 l (l^2 + h^2) = 0,000046 (\bar{5}, 6618544), \\
(m, m^V)_5 [2l(l l^V + h h^V) + l^V (l^2 + h^2)] &= -0,001210 (\bar{3}, 0830259), \\
(m, m^V)_6 [2l(l l^V + h h^V) + l^V (l^2 + h^2)] &= 0,001206 (\bar{3}, 0816744), \\
(m, m^V)_7 l^V (l^{V2} + h^{V2}) &= -0,000000 (\bar{8}, 0178553), \\
(m, m^V)_8 l^V (l^{V2} + h^{V2}) &= 0,000000 (\bar{8}, 2225649), \\
(m, m^V)_9 [l(l^{V2} - h^{V2}) + 2l^V h^V h] &= 0,000015 (\bar{5}, 1771555), \\
\frac{1}{2} (m, m^V)_4 [l(l^{V2} - h^{V2}) + 2l^V h^V h] &= -0,000001 (\bar{6}, 1834022), \\
(m, m^V)_{10} [l^V (p^V - p)^2 - h^V (q^V (p^V - p) - p (q^V - q))] &= -0,000688 (\bar{4}, 8378056), \\
(m, m^V)_{11} [l^V (p^V - p)^2 - h^V (q^V (p^V - p) - p (q^V - q))] &= -0,000696 (\bar{4}, 8426329), \\
(m, m^V)_{12} [l^V (p^V - p)^2 - h^V (q^V (p^V - p) - p (q^V - q))] &= -0,000012 (\bar{5}, 0650852), \\
(m, m^V)_{13} [l((q^V - q)^2 - (p^V - p)^2) + 2h(p^V - p)(q^V - q)] &= -0,000132 (\bar{4}, 1202431), \\
(m, m^V)_{14} [l((q^V - q)^2 - (p^V - p)^2) + 2h(p^V - p)(q^V - q)] &= 0,000308 (\bar{4}, 4886238),
\end{aligned}$$

$$\begin{aligned}(m, m^V)_{15} [l^V ((q^V - q)^2 + (p^V - p)^2) + 2h^V (qp^V - q^V p)] &= -0,000531 (\bar{4}, 7249226), \\ (m, m^V)_{16} [l^V ((q^V - q)^2 + (p^V - p)^2) + 2h^V (qp^V - q^V p)] &= 0,000533 (\bar{4}, 7271622), \\ \frac{1}{2} (m, m^V) l (l^2 + h^2) &= 0,000090 (\bar{5}, 9562073), \quad \frac{1}{2} [m, m^V] l^V (l^2 + h^2) = 0,000000 (\bar{8}, 8432667).\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,004274,

« « « третьяго порядка = - 0,000525.

Меркурій и Уранъ.

$$\begin{aligned}(m, m^{VI}) l &= 0,000103, \quad (m, m^{VI}) l^{VI} = -0,000002, \\ (m, m^{VI})_1 l [l^{VI2} + h^{VI2} - (q^{VI} - q)^2 - (p^{VI} - p)^2] &= 0,000000 (\bar{10}, 8042356), \\ (m, m^{VI})_4 l [l^{VI1} + h^{VI2} + (q^{VI} - q)^2 - (p^{VI} - p)^2] &= -0,000001 (\bar{6}, 1946560), \\ (m, m)_2 l (l^2 + h^2) &= -0,000001 (\bar{6}, 0361287), \quad (m, m^{VI})_3 l (l^2 + h^2) = 0,000001 (\bar{6}, 0378447), \\ (m, m)_5 [2l (ll^{VI} + hh^{VI}) + l^{VI} (l^2 + h^2)] &= 0,000091 (\bar{5}, 9591166), \\ (m, m^{VI})_6 [2l (ll^{VI} + hh^{VI}) + l^{VI} (l^2 + h^2)] &= -0,000091 (\bar{5}, 9587951), \\ (m, m^{VI})_7 l^{VI} (l^{VI2} + h^{VI2}) &= -0,000000 (\bar{7}, 3142094), \\ (m, m^{VI})_8 l^{VI} (l^{VI2} + h^{VI2}) &= -0,000000 (\bar{9}, 8691578), \\ (m, m^{VI})_9 [l (l^{VI2} - h^{VI2}) + 2l^{VI} h^{VI} h] &= 0,000000 (\bar{7}, 1571096), \\ \frac{1}{2} (m, m^{VI})_4 [l (l^{VI2} - h^{VI2}) + 2l^{VI} h^{VI} h] &= -0,000000 (\bar{8}, 9357514), \\ (m, m^{VI})_{10} [l^{VI} (p^{VI} - p)^2 - h^{VI} (q^{VI} (p^{VI} - p) - p (q^{VI} - q))] &= -0,000011 (\bar{5}, 0628292), \\ (m, m^{VI})_{11} [l^{VI} (p^{VI} - p)^2 - h^{VI} (q^{VI} (p^{VI} - p) - p (q^{VI} - p))] &= -0,000011 (\bar{5}, 0640229), \\ (m, m^{VI})_{12} [l^{VI} (p^{VI} - p)^2 - h^{VI} (q^{VI} (p^{VI} - p) - p (q^{VI} - q))] &= 0,000000 (\bar{9}, 7246665), \\ (m, m^{VI})_{13} [l ((q^{VI} - q)^2 - (p^{VI} - p)^2) + 2h (p^{VI} - p) (q^{VI} - q)] &= -0,000003 (\bar{6}, 5378591), \\ (m, m^{VI})_{14} [l ((q^{VI} - q)^2 - (p^{VI} - p)^2) + 2h (p^{VI} - p) (q^{VI} - q)] &= 0,000008 (6, 9056889), \\ (m, m^{VI})_{15} [l^V ((q^V - q)^2 + (p^V - p)^2) + 2h^V (qp^V - q^V p)] &= 0,000025 (\bar{5}, 3982012), \\ (m, m^{VI})_{16} [l^V ((q^V - q)^2 + (p^V - p)^2) + 2h^V (qp^V - q^V p)] &= -0,000025 (\bar{5}, 3987507), \\ \frac{1}{2} (m, m^{VI}) l (l^2 + h^2) &= 0,000002 (\bar{6}, 3372185), \quad \frac{1}{2} [m, m^{VI}] l^{VI} (l^2 + h^2) = -0,000000 (\bar{8}, 6496548).\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000105,

« « « третьяго порядка = - 0,000012.

Венера и Меркурій.

$$\begin{aligned}(m', m) l' &= -0,001224, \quad [m', m] l = 0,010173, \\ (m', m)_1 l' [l^2 + h^2 - (q' - q)^2 - (p' - p)^2] &= 0,000038 (\bar{5}, 5753216),\end{aligned}$$

$$\begin{aligned}
(m', m)_4 l' [l'^2 + h'^2 - (q' - q)^2 - (p' - p)^2] &= -0,000188 (\bar{4}, 2747909), \\
(m', m)_2 l' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 4330242), \quad (m', m)_3 l' (l'^2 + h'^2) = -0,000000 (\bar{7}, 2768040), \\
(m', m)_5 [2l' (l'l' + hh') + l' (l'^2 + h'^2)] &= 0,000001 (\bar{6}, 2011098), \\
(m', m)_6 [2l' (l'l' + hh') + l' (l'^2 + h'^2)] &= 0,000000 (\bar{7}, 5766492), \\
(m', m)_7 l' (l'^2 + h'^2) &= -0,000644 (\bar{4}, 8088490), \quad (m', m)_8 l' (l'^2 + h'^2) = 0,001456 (\bar{3}, 1630610), \\
(m', m)_9 [l' (l'^2 - h'^2) + 2lhh'] &= -0,000130 (\bar{4}, 1139541), \\
\frac{1}{2} (m', m)_4 [l' (l'^2 - h'^2) + 2lhh'] &= 0,000164 (\bar{4}, 2153532), \\
(m', m)_{10} [l' (p' - p)^2 - h' (q' (p' - p') - p' (q' - q'))] &= 0,000060 (\bar{5}, 7791273), \\
(m', m)_{11} [l' (p' - p)^2 - h' (q' (p' - p') - p' (q' - q'))] &= 0,000447 (\bar{4}, 6506867), \\
(m', m)_{12} [l' (p' - p)^2 - h' (q' (p' - p') - p' (q' - q'))] &= -0,000092 (\bar{5}, 9663251), \\
(m', m)_{13} [l' ((q' - q)^2 - (p' - p)^2) + 2h' (p' - p') (q' - q')] &= -0,000002 (\bar{6}, 4008316), \\
(m', m)_{14} [l' ((q' - q)^2 - (p' - p)^2) + 2h' (p' - p') (q' - q')] &= 0,000007 (\bar{6}, 8283712), \\
(m', m)_{15} [l' ((q' - q)^2 + (p' - p)^2) + 2h' (q'p - qp')] &= 0,000212 (\bar{4}, 3256472), \\
(m', m)_{16} [l' ((q' - q)^2 + (p' - p)^2) + 2h' (q'p - qp')] &= -0,000852 (\bar{4}, 9305696), \\
\frac{1}{2} (m', m) l' (l'^2 + h'^2) &= -0,000000 (\bar{8}, 4588443), \quad \frac{1}{2} [m', m] l' (l'^2 + h'^2) = 0,000000 (\bar{7}, 3785504).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,011397$,

« « « третьяго порядка = $0,002183$.

Венера и Земля.

$$\begin{aligned}
(m', m'') l' &= -0,029200, \quad [m', m''] l' = -0,015712, \\
(m', m'')_1 l' [l''^2 + h''^2 - (q'' - q')^2 - (p'' - p')^2] &= -0,000325 (\bar{4}, 5125654), \\
(m', m'')_4 l' [l''^2 + h''^2 - (q'' - q')^2 - (p'' - p')^2] &= 0,001158 (\bar{3}, 0637474), \\
(m', m'')_2 l' (l''^2 + h''^2) &= 0,000002 (\bar{6}, 2920550), \quad (m', m'')_3 l' (l''^2 + h''^2) = -0,000008 (\bar{6}, 9344823), \\
(m', m'')_5 [2l' (l'l'' + h'h'') + l' (l''^2 + h''^2)] &= 0,000014 (\bar{5}, 1582080), \\
(m', m'')_6 [2l' (l'l'' + h'h'') + l' (l''^2 + h''^2)] &= 0,000027 (\bar{5}, 4385670), \\
(m', m'')_7 l' (l''^2 + h''^2) &= 0,000013 (\bar{5}, 1338717), \quad (m', m'')_8 l' (l''^2 + h''^2) = -0,000036 (\bar{5}, 5558268), \\
(m', m'')_9 [l' (l''^2 - h''^2) + 2l'h'h'] &= -0,000007 (\bar{6}, 8195986), \\
\frac{1}{2} (m', m'')_4 [l' (l''^2 - h''^2) + 2l'h'h'] &= 0,000027 (\bar{5}, 4352356), \\
(m', m'')_{10} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p' (q'' - q'))] &= -0,000036 (\bar{5}, 5611635), \\
(m', m'')_{11} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p' (q'' - q'))] &= -0,002066 (\bar{3}, 3150708),
\end{aligned}$$

$$\begin{aligned}
 (m', m'')_{12} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p' (q'' - q'))] &= 0,000587 (\bar{4}, 7686421), \\
 (m', m'')_{13} [l' ((q'' - q')^2 - (p'' - p')^2) + 2h' (p'' - p') (q'' - q')] &= -0,000463 (\bar{4}, 6654164), \\
 (m', m'')_{14} [l' ((q'' - q')^2 - (p'' - p')^2) + 2h' (p'' - p') (q'' - q')] &= 0,001387 (\bar{3}, 1422792), \\
 (m', m'')_{15} [l'' ((q'' - q')^2 + (p'' - p')^2) + 2h'' (q' p'' - q'' p')] &= 0,000051 (\bar{5}, 7046959), \\
 (m', m'')_{16} [l' ((q'' - q')^2 + (p'' - p')^2) + 2h'' (q' p'' - q'' p')] &= -0,000442 (\bar{4}, 6458831), \\
 \frac{1}{2} (m', m'') l' (l'^2 + h'^2) &= -0,000000 (\bar{7}, 8364537), \quad \frac{1}{2} (m', m'') l'' (l'^2 + h'^2) = -0,000000 (\bar{7}, 5673214).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,013488$,

« « « третьяго порядка = $-0,000455$.

Венера и Марсъ.

$$\begin{aligned}
 (m', m''') l' &= -0,000438, \quad [m', m'''] l'' = 0,004849, \\
 (m', m''')_1 l' [l''^2 + h''^2 - (q''' - q')^2 - (p''' - p')^2] &= 0,000002 (\bar{6}, 2701653), \\
 (m', m''')_4 l' [l''^2 + h''^2 - (q''' - q')^2 - (p''' - p')^2] &= -0,000011 (\bar{5}, 0424906), \\
 (m', m''')_2 l' (l'^2 + h'^2) &= 0,000000 (\bar{9}, 9003291), \quad (m', m''')_3 l' (l'^2 + h'^2) = -0,000000 (\bar{8}, 3813963), \\
 (m', m''')_5 [2l' (l' l''' + h' h''') + l'' (l'^2 + h'^2)] &= -0,000001 (\bar{6}, 0601258), \\
 (m', m''')_6 [2l' (l' l''' + h' h''') + l'' (l'^2 + h'^2)] &= 0,000000 (\bar{7}, 2335945), \\
 (m', m''')_7 l'' (l''^2 + h''^2) &= -0,000055 (\bar{5}, 7420971), \\
 (m', m''')_8 l''' (l''^2 + h''^2) &= 0,000119 (\bar{4}, 0756998), \\
 (m', m''')_9 [l' (l''^2 - h''^2) + 2l'' h'' h'''] &= 0,000009 (\bar{6}, 9675093), \\
 \frac{1}{2} (m', m''')_4 [l' (l''^2 - h''^2) + 2l'' h'' h'''] &= -0,000010 (\bar{5}, 0051156), \\
 (m', m''')_{10} [l''' (p''' - p')^2 - h''' (q''' (p''' - p') - p' (q''' - q'))] &= 0,000004 (\bar{6}, 5972202), \\
 (m', m''')_{11} [l''' (p''' - p')^2 - h''' (q''' (p''' - p') - p' (q''' - q'))] &= 0,000019 (\bar{5}, 2729318), \\
 (m', m''')_{12} [l''' (p''' - p')^2 - h''' (q''' (p''' - p') - p' (q''' - q'))] &= -0,000003 (\bar{6}, 5203121), \\
 (m', m''')_{13} [l' ((q''' - q')^2 - (p''' - p')^2) + 2h' (p''' - p') (q''' - q')] &= -0,000000 (\bar{7}, 4548711), \\
 (m', m''')_{14} [l' ((q''' - q')^2 - (p''' - p')^2) + 2h' (p''' - p') (q''' - q')] &= 0,000001 (\bar{6}, 1951751), \\
 (m', m''')_{15} [l''' ((q''' - q')^2 + (p''' - p')^2) + 2h''' (q' p''' - q'' p')] &= -0,000016 (\bar{5}, 2034407), \\
 (m', m''')_{16} [l''' ((q''' - q')^2 + (p''' - p')^2) + 2h''' (q' p''' - q'' p')] &= 0,000042 (\bar{5}, 6235015), \\
 \frac{1}{2} (m', m''') l' (l'^2 + h'^2) &= -0,000000 (\bar{8}, 0124761), \quad \frac{1}{2} (m', m''') l'' (l'^2 + h'^2) = 0,000000 (\bar{7}, 0567321).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,005287$,

« « « третьяго порядка = $0,000162$.

Венера и Юпитеръ.

$$\begin{aligned}
(m', m'') l' &= -0,018002, & [m', m''] l'' &= 0,034360, \\
(m', m'')_1 l' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] &= 0,000000 (7,6232557), \\
(m', m'')_4 l' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] &= -0,000022 (5,3485173), \\
(m', m'')_2 l' (l'^2 + h'^2) &= 0,000000 (7,3343355), & (m', m'')_3 l' (l'^2 + h'^2) &= -0,000000 (7,4005758), \\
(m', m'')_5 [2l' (l'l'' + h'h'') + l'' (l'^2 + h'^2)] &= -0,000054 (5,7291859), \\
(m', m'')_6 [2l' (l'l'' + h'h'') + l'' (l'^2 + h'^2)] &= 0,000026 (5,4109256), \\
(m', m'')_7 l'' (l'^2 + h'^2) &= -0,000074 (5,8671288), \\
(m', m'')_8 l'' (l'^2 + h'^2) &= 0,000133 (4,1245572), \\
(m', m'')_9 [l' (l'^2 - h'^2) + 2l'' h' h''] &= 0,000021 (5,3268396), \\
\frac{1}{2} (m', m'')_4 [l' (l'^2 - h'^2) + 2l'' h' h''] &= -0,000013 (5,1282011), \\
(m', m'')_{10} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p' (q'' - q'))] &= 0,000876 (4,9423230), \\
(m', m'')_{11} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p' (q'' - q'))] &= 0,000998 (4,9990732), \\
(m', m'')_{12} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p' (q'' - q'))] &= -0,000021 (5,3209428), \\
(m', m'')_{13} [l' ((q'' - q')^2 - (p'' - p')^2) + 2h' (p'' - p') (q'' - q')] &= -0,000034 (5,5350541), \\
(m', m'')_{14} [l' ((q'' - q')^2 - (p'' - p')^2) + 2h' (p'' - p') (q'' - q')] &= 0,000081 (5,9077321), \\
(m', m'')_{15} [l'' ((q'' - q')^2 + (p'' - p')^2) + 2h'' (q' p'' - q'' p')] &= -0,001259 (3,1000028), \\
(m', m'')_{16} [l'' ((q'' - q')^2 + (p'' - p')^2) + 2h'' (q' p'' - q'' p')] &= 0,001339 (3,1268657), \\
\frac{1}{2} (m', m'') l' (l'^2 + h'^2) &= -0,000000 (8,0124761), & \frac{1}{2} [m', m''] l'' (l'^2 + h'^2) &= 0,000000 (7,0567321).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,052362,

« « « третьяго порядка = -0,000047.

Венера и Сатурнъ.

$$\begin{aligned}
(m', m') l' &= -0,000851, & [m', m'] l'' &= 0,000016, \\
(m', m')_1 l' [l'^2 + h'^2 - (p'' - q')^2 - (p'' - p')^2] &= 0,000000 (8,1409302), \\
(m', m')_4 l' [l'^2 + h'^2 - (p'' - q')^2 - (p'' - p')^2] &= -0,000002 (6,3846736), \\
(m', m')_2 l' (l'^2 + h'^2) &= 0,000000 (8,0025656), & (m', m')_3 l' (l'^2 + h'^2) &= -0,000000 (8,0231022), \\
(m', m')_5 [2l' (l'l'' + h'h'') + l'' (l'^2 + h'^2)] &= 0,000003 (6,5164190), \\
(m', m')_6 [2l' (l'l'' + h'h'') + l'' (l'^2 + h'^2)] &= -0,000003 (6,5116136), \\
(m', m')_7 l'' (l'^2 + h'^2) &= -0,000000 (8,6563523), & (m', m')_8 l'' (l'^2 + h'^2) &= 0,000000 (8,9084820),
\end{aligned}$$

$$\begin{aligned}
 (m', m'')_9 [l' (l'^2 - h'^2) + 2l' h' h'] &= -0,000003 (\bar{6}, 5427998), \\
 \frac{1}{2} (m', m'')_4 [l' (l'^2 - h'^2) + 2l' h' h'] &= -0,000002 (\bar{6}, 3278737), \\
 (m', m'')_{10} [l' (p' - p')^2 - h' (q' (p' - p') - p' (q' - q'))] &= -0,000202 (\bar{4}, 3050609), \\
 (m', m'')_{11} [l' (p' - p')^2 - h' (q' (p' - p') - p' (q' - q'))] &= -0,000210 (\bar{4}, 3219160), \\
 (m', m'')_{12} [l' (p' - p')^2 - h' (q' (p' - p') - p' (q' - q'))] &= 0,000001 (\bar{6}, 1280924), \\
 (m', m'')_{13} [l' ((q' - q')^2 - (p' - p')^2) + 2h' (p' - p') (q' - q')] &= -0,000000 (\bar{7}, 5915342), \\
 (m', m'')_{14} [l' ((q' - q')^2 - (p' - p')^2) + 2h' (p' - p') (q' - q')] &= 0,000000 (\bar{7}, 9609192), \\
 (m', m'')_{15} [l' ((q' - q')^2 + (p' - p')^2) + 2h' (q' p' - q' p')] &= -0,000230 (\bar{4}, 3619868), \\
 (m', m'')_{16} [l' ((q' - q')^2 + (p' - p')^2) + 2h' (q' p' - q' p')] &= 0,000234 (\bar{4}, 3697928), \\
 \frac{1}{2} (m', m'') l' (l'^2 + h'^2) &= -0,000000 (\bar{8}, 3010483), \\
 \frac{1}{2} [m', m''] l' (l'^2 + h'^2) &= 0,000000 (\bar{10}, 5710484).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,000867,

« « « третьяго порядка = 0,000006.

Венера и Уранъ.

$$\begin{aligned}
 (m', m'') l' &= -0,000020, \quad [m', m''] l'' = -0,000010, \\
 (m', m'')_1 l' [l'^2 + h'^2 - (q' - q')^2 - (p' - p')^2] &= 0,000000 (\bar{12}, 5390225), \\
 (m', m'')_4 l' [l'^2 + h'^2 - (q' - q')^2 - (p' - p')^2] &= -0,000000 (\bar{9}, 3870073), \\
 (m', m'')_2 l' (l'^2 + h'^2) &= 0,000000 (\bar{10}, 3791320), \\
 (m', m'')_3 l' (l'^2 + h'^2) &= -0,000000 (\bar{10}, 3842710), \\
 (m', m'')_5 [2l' (l' l'' + h' h'') + l'' (l'^2 + h'^2)] &= 0,000000 (\bar{7}, 4299544), \\
 (m', m'')_6 [2l' (l' l'' + h' h'') + l'' (l'^2 + h'^2)] &= -0,000000 (\bar{7}, 4267801), \\
 (m', m'')_7 l'' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 2991868), \\
 (m', m'')_8 l'' (l'^2 + h'^2) &= -0,000000 (\bar{8}, 5496126), \\
 (m', m'')_9 [l' (l'^2 - h'^2) + 2l' h' h'] &= -0,000000 (\bar{8}, 3220968), \\
 \frac{1}{2} (m', m'')_4 [l' (l'^2 - h'^2) + 2l' h' h'] &= 0,000000 (\bar{8}, 1019521), \\
 (m', m'')_{10} [l'' (p' - p')^2 - h'' (q' (p' - p') - p' (q' - q'))] &= -0,000008 (\bar{6}, 8956694), \\
 (m', m'')_{11} [l'' (p' - p')^2 - h'' (q' (p' - p') - p' (q' - q'))] &= -0,000008 (\bar{6}, 8998372), \\
 (m', m'')_{12} [l'' (p' - p')^2 - h'' (q' (p' - p') - p' (q' - q'))] &= 0,000000 (\bar{8}, 1026971), \\
 (m', m'')_{13} [l' ((q' - q')^2 - (p' - p')^2) + 2h' (p' - p') (q' - q')] &= -0,000000 (\bar{8}, 6757554),
 \end{aligned}$$

$$(m', m'')_{14} [l'((q'' - q')^2 - (p'' - p')^2) + 2h'(p'' - p')(q'' - q')] = 0,000000(\bar{7},0440721),$$

$$(m', m'')_{15} [l''((q'' - q')^2 - (p'' - p')^2) + 2h''(q''p'' - q'p')] = 0,000006(\bar{6},7834842),$$

$$(m', m'')_{16} [l''((q'' - q')^2 - (p'' - p')^2) + 2h''(q''p'' - q'p')] = -0,000006(\bar{6},7853883),$$

$$\frac{1}{2}(m', m'') l' (l'^2 + h'^2) = -0,000000(\bar{10},6795415),$$

$$\frac{1}{2}[m', m''] l'' (l'^2 + h'^2) = -0,000000(\bar{10},3872288).$$

Слѣд. сумма членовъ перваго порядка = $-0,000010$,

« « « третьяго порядка = $0,000000$.

Земля и Меркурій.

$$(m'', m) l'' = -0,000183, \quad [m'', m'] l = 0,001735,$$

$$(m'', m)_1 l'' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] = 0,000001(\bar{6},1890994),$$

$$(m'', m)_4 l'' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] = -0,000012(\bar{5},0985951),$$

$$(m'', m)_2 l'' (l''^2 + h''^2) = 0,000000(\bar{8},2135393),$$

$$(m'', m)_3 l'' (l''^2 + h''^2) = -0,000000(\bar{8},5869510),$$

$$(m'', m)_5 [2l''(l'' + hh'') + l(l''^2 + h''^2)] = 0,000000(\bar{7},1929569),$$

$$(m'', m)_6 [2l''(l'' + hh'') + l(l''^2 + h''^2)] = -0,000000(\bar{8},9235013),$$

$$(m'', m)_7 l(l'^2 + h'^2) = -0,000083(\bar{5},9203970), \quad (m'', m)_8 l(l'^2 + h'^2) = 0,000169(\bar{4},2271298),$$

$$(m'', m)_9 [l''(l'^2 - h'^2) + 2lh'h''] = -0,000043(\bar{5},6338808),$$

$$\frac{1}{2}(m'', m)_4 [l''(l'^2 - h'^2) + 2lh'h''] = 0,000039(\bar{5},5867566),$$

$$(m'', m)_{10} [l(p'' - p')^2 - h(q(p - p'') - p''(q - q'))] = -0,000088(\bar{5},9474091),$$

$$(m'', m)_{11} [l(p'' - p')^2 - h(q(p - p'') - p''(q - q'))] = -0,000246(\bar{4},3907588),$$

$$(m'', m)_{12} [l(p'' - p')^2 - h(q(p - p'') - p''(q - q'))] = 0,000032(\bar{5},5084783),$$

$$(m'', m)_{13} [l''((q'' - q')^2 - (p'' - p')^2) + 2h''(p - p'')(q - q'')] = -0,000016(\bar{5},2157036),$$

$$(m'', m)_{14} [l''((q'' - q')^2 - (p'' - p')^2) + 2h''(p - p'')(q - q'')] = 0,000041(\bar{5},6176274),$$

$$(m'', m)_{15} [l((q'' - q')^2 - (p'' - p')^2) + 2h(q''p - qp'')] = -0,000069(\bar{5},8401313),$$

$$(m'', m)_{16} [l((q'' - q')^2 - (p'' - p')^2) + 2h(q''p - qp'')] = 0,000122(\bar{4},0874305),$$

$$\frac{1}{2}(m'', m) l'' (l''^2 + h''^2) = 0,000000(\bar{8},4109525), \quad \frac{1}{2}[m'', m] l(l''^2 + h''^2) = 0,000000(\bar{7},3884264).$$

Слѣд. сумма членовъ перваго порядка = $-0,001918$,

« « « третьяго порядка = $0,000263$.

Земля и Венера.

$$\begin{aligned}
 (m'', m') l'' &= -0,014351, & [m'', m'] l' &= -0,018489, \\
 (m'', m')_1 l'' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] &= -0,000172 (\bar{4}, 2345875), \\
 (m'', m')_4 l'' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] &= 0,000611 (\bar{4}, 7857695), \\
 (m'', m')_5 [2l'' (l' l'' + h' h'') + l' (l''^2 + h''^2)] &= 0,000019 (\bar{5}, 2900653), \\
 (m'', m')_6 [2l'' (l' l'' + h' h'') + l' (l''^2 + h''^2)] &= -0,000037 (\bar{5}, 5704243), \\
 (m'', m')_2 l'' (l''^2 + h''^2) &= 0,000006 (\bar{6}, 7615644), \\
 (m'', m')_3 l'' (l''^2 + h''^2) &= -0,000025 (\bar{5}, 4039917), \\
 (m'', m')_7 l' (l'^2 + h'^2) &= 0,000003 (\bar{6}, 4265535), & (m'', m')_8 l' (l'^2 + h'^2) &= -0,000007 (\bar{6}, 8485086), \\
 (m'', m')_9 [l'' (l'^2 - h'^2) + 2l' h' h''] &= 0,000006 (\bar{6}, 7497695), \\
 \frac{1}{2} (m'', m')_4 [l'' (l'^2 - h'^2) + 2l' h' h''] &= -0,000023 (\bar{5}, 3654065), \\
 (m'', m')_{10} [l' (p'' - p')^2 - h' (q' (p' - p'') - p'' (q' - q''))] &= -0,000022 (\bar{5}, 3405399), \\
 (m'', m')_{11} [l' (p'' - p')^2 - h' (q' (p' - p'') - p'' (q' - q''))] &= -0,001242 (\bar{3}, 0944472), \\
 (m'', m')_{12} [l' (p'' - p')^2 - h' (q' (p' - p'') - p'' (q' - q''))] &= 0,000353 (\bar{4}, 5480185), \\
 (m'', m')_{13} [l'' ((q'' - q')^2 - (p'' - p')^2) + 2h'' (p' - p'') (q' - q'')] &= -0,000590 (\bar{4}, 7708639), \\
 (m'', m')_{14} [l'' ((q'' - q')^2 - (p'' - p')^2) + 2h'' (p' - p'') (q' - q'')] &= 0,001769 (\bar{3}, 2477267), \\
 (m'', m')_{15} [l' ((q'' - q')^2 + (p'' - p')^2) + 2h' (q'' p' - q' p'')] &= 0,000060 (\bar{5}, 7753749), \\
 (m'', m')_{16} [l' ((q'' - q')^2 + (p'' - p')^2) + 2h' (q'' p' - q' p'')] &= -0,000521 (\bar{4}, 7165621), \\
 \frac{1}{2} (m'', m') l'' (l''^2 + h''^2) &= -0,000002 (\bar{6}, 3059631), \\
 \frac{1}{2} [m'', m'] l' (l'^2 + h'^2) &= -0,000003 (\bar{6}, 4159976).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,004138,

« « « третьяго порядка = -0,001091.

Земля и Марсъ.

$$\begin{aligned}
 (m'', m''') l'' &= -0,000827, & [m'', m'''] l''' &= 0,018939, \\
 (m'', m''')_1 l'' [l'''^2 + h'''^2 - (q''' - q'')^2 - (p''' - p'')^2] &= 0,000013 (\bar{5}, 1005535), \\
 (m'', m''')_4 l'' [l'''^2 + h'''^2 - (q''' - q'')^2 - (p''' - p'')^2] &= -0,000049 (\bar{5}, 6931946), \\
 (m'', m''')_2 l'' (l''^2 + h''^2) &= 0,000000 (\bar{7}, 3064646), \\
 (m'', m''')_3 l'' (l''^2 + h''^2) &= -0,000000 (\bar{7}, 9299689), \\
 (m'', m''')_5 [2l'' (l' l''' + h' h''') + l''' (l''^2 + h''^2)] &= -0,000012 (\bar{5}, 0647528),
 \end{aligned}$$

$$\begin{aligned}
(m'', m''')_6 [2l'' (l'' l''' + h'' h''') + l''' (l''^2 + h''^2)] &= 0,000015 (\bar{5}, 1732030), \\
(m'', m''')_7 l''' (l''^2 + h''^2) &= -0,000364 (\bar{4}, 5616248), \\
(m'', m''')_8 l''' (l''^2 + h''^2) &= 0,000911 (\bar{4}, 9597318), \\
(m'', m''')_9 [l'' (l''^2 - h''^2) + 2l'' h'' h'''] &= 0,000017 (\bar{5}, 2336394), \\
\frac{1}{2} (m'', m''')_4 [l'' (l''^2 - h''^2) + 2l'' h'' h'''] &= -0,000030 (\bar{5}, 4733377), \\
(m'', m''')_{10} [l''' (p''' - p'')^2 - h''' (q''' (p''' - p'') - p'' (q''' - q''))] &= 0,000007 (\bar{6}, 8633771), \\
(m'', m''')_{11} [l''' (p''' - p'')^2 - h''' (q''' (p''' - p'') - p'' (q''' - q''))] &= 0,000175 (\bar{4}, 2423663), \\
(m'', m''')_{12} [l''' (p''' - p'')^2 - h''' (q''' (p''' - p'') - p'' (q''' - q''))] &= -0,000045 (\bar{5}, 6574327), \\
(m'', m''')_{13} [l'' ((q''' - p'')^2 - (p''' - p'')^2) + 2h'' (p''' - p'') (q''' - q'')] &= -0,000011 (\bar{5}, 0451845), \\
(m'', m''')_{14} [l'' ((q''' - q'')^2 - (p''' - p'')^2) + 2h'' (p''' - p'') (q''' - q'')] &= 0,000031 (\bar{5}, 4939004), \\
(m'', m''')_{15} [l''' ((q''' - q'')^2 + (p''' - p'')^2) + 2h''' (q'' p''' - q''' p'')] &= -0,000000 (\bar{8}, 9457189), \\
(m'', m''')_{16} [l''' ((q''' - q'')^2 + (p''' - p'')^2) + 2h''' (q'' p''' - q''' p'')] &= 0,000115 (\bar{4}, 0616873), \\
\frac{1}{2} (m'', m''') l'' (l''^2 + h''^2) &= -0,000000 (\bar{7}, 0666469), \\
\frac{1}{2} [m'', m'''] l''' [l''^2 + h''^2] &= 0,000003 (\bar{6}, 4264353).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,019766$,

« « « третьяго порядка = $0,001014$.

Земля и Юпитеръ.

$$\begin{aligned}
(m'', m^{IV}) l'' &= -0,019566, \quad [m'', m^{IV}] l^{IV} = 0,079716, \\
(m'', m^{IV})_1 l'' [l^{IV^2} + h^{IV^2} - (q^{IV} - q'')^2 - (p^{IV} - p'')^2] &= 0,000002 (\bar{6}, 3214540), \\
(m'', m^{IV})_4 l'' [l^{IV^2} + h^{IV^2} - (q^{IV} - q'')^2 - (p^{IV} - p'')^2] &= -0,000060 (\bar{5}, 7757042), \\
(m'', m^{IV})_2 l'' (l''^2 + h''^2) &= 0,000001 (\bar{6}, 1577380), \\
(m'', m^{IV})_3 l'' (l''^2 + h''^2) &= -0,000002 (\bar{6}, 2781514), \\
(m'', m^{IV})_5 [2l'' (l'' l^{IV} + h'' h^{IV}) + l^{IV} (l''^2 + h''^2)] &= -0,000245 (\bar{4}, 3889798), \\
(m'', m^{IV})_6 [2l'' (l'' l^{IV} + h'' h^{IV}) + l^{IV} (l''^2 + h''^2)] &= 0,000022 (\bar{5}, 3531601), \\
(m'', m^{IV})_7 l^{IV} (l^{IV^2} + h^{IV^2}) &= -0,000175 (\bar{4}, 2434194), \\
(m'', m^{IV})_8 l^{IV} (l^{IV^2} + h^{IV^2}) &= 0,000322 (\bar{4}, 5076791), \\
(m'', m^{IV})_9 [l'' (l^{IV^2} - h^{IV^2}) + 2l^{IV} h^{IV} h''] &= -0,000039 (\bar{5}, 5890699), \\
\frac{1}{2} (m'', m^{IV})_4 [l'' (l^{IV^2} - h^{IV^2}) + 2l^{IV} h^{IV} h''] &= 0,000051 (\bar{5}, 7124660), \\
(m'', m^{IV})_{10} [l^{IV} (p^{IV} - p'')^2 - h^{IV} (q^{IV} (p^{IV} - p'') - p'' (q^{IV} - q''))] &= 0,000570 (\bar{4}, 7558441),
\end{aligned}$$

$$\begin{aligned}
 (m'', m'')_{11} [l''(p'' - p'')^2 - h''(q''(p'' - p'') - p''(q'' - q''))] &= 0,000731 (\bar{4},8641436), \\
 (m'', m'')_{12} [l''(p'' - p'')^2 - h''(q''(p'' - p'') - p''(q'' - q''))] &= -0,000028 (\bar{5},4536491), \\
 (m'', m'')_{13} [l''((q'' - q'')^2 - (p'' - p'')^2) + 2h''(p'' - p'')(q'' - q'')] &= 0,000006 (\bar{6},8040885), \\
 (m'', m'')_{14} [l''((q'' - q'')^2 - (p'' - p'')^2) + 2h''(p'' - p'')(q'' - q'')] &= -0,000015 (\bar{5},1809700), \\
 (m'', m'')_{15} [l''((q'' - q'')^2 + (p'' - p'')^2) + 2h''(q''p'' - q'p'')] &= -0,000459 (\bar{4},6620041), \\
 (m'', m'')_{16} [l''((q'' - q'')^2 + (p'' - p'')^2) + 2h''(q''p'' - q'p'')] &= 0,000518 (\bar{4},7144632), \\
 \frac{1}{2} (m'', m'') l'' (l''^2 + h''^2) &= -0,000003 (\bar{6},4405776), \\
 \frac{1}{2} [m'', m''] l'' (l''^2 + h''^2) &= 0,000011 (\bar{5},0506133).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,099282,

« « « третьяго порядка = 0,000480.

Земля и Сатурнъ.

$$\begin{aligned}
 (m'', m'') l'' &= -0,000903, & (m'', m'') l' &= 0,000036, \\
 (m'', m'')_1 l'' [l''^2 + h''^2 - (q'' - q'')^2 - (p'' - p'')^2] &= 0,000000 (\bar{7},2816931), \\
 (m'', m'')_4 l'' [l''^2 + h''^2 - (q'' - q'')^2 - (p'' - p'')^2] &= -0,000002 (\bar{6},2472224), \\
 (m'', m'')_2 l'' (l''^2 + h''^2) &= 0,000000 (\bar{8},8086881), \\
 (m'', m'')_3 l'' (l''^2 + h''^2) &= -0,000000 (\bar{8},8477970), \\
 (m'', m'')_5 [2l''(l''l' + h''h') + l' (l''^2 + h''^2)] &= 0,000008 (\bar{6},8825640), \\
 (m'', m'')_6 [2l''(l''l' + h''h') + l' (l''^2 + h''^2)] &= -0,000007 (\bar{6},8731438), \\
 (m'', m'')_7 l' (l''^2 + h''^2) &= -0,000000 (\bar{7},0151378), \\
 (m'', m'')_8 l' (l''^2 + h''^2) &= 0,000000 (\bar{7},2693148), \\
 (m'', m'')_9 [l'' (l''^2 - h''^2) + 2l'h'h''] &= -0,000009 (\bar{6},6252823), \\
 \frac{1}{2} (m'', m'')_4 [l'' (l''^2 - h''^2) + 2l'h'h''] &= 0,000003 (\bar{6},4166509), \\
 (m'', m'')_{10} [l' (p'' - p'')^2 - h' (q''(p'' - p'') - p''(q'' - q''))] &= 0,000077 (\bar{5},8896521), \\
 (m'', m'')_{11} [l' (p'' - p'')^2 - h' (q''(p'' - p'') - p''(q'' - q''))] &= 0,000083 (\bar{5},9218643), \\
 (m'', m'')_{12} [l' (p'' - p'')^2 - h' (q''(p'' - p'') - p''(q'' - q''))] &= -0,000000 (\bar{7},9601589), \\
 (m'', m'')_{13} [l''((q'' - q'')^2 - (p'' - p'')^2) + 2h''(p'' - p'')(q'' - q'')] &= 0,000004 (\bar{6},6502484), \\
 (m'', m'')_{14} [l''((q'' - q'')^2 - (p'' - p'')^2) + 2h''(p'' - p'')(q'' - q'')] &= -0,000010 (\bar{5},0209092), \\
 (m'', m'')_{15} [l'((q'' - q'')^2 + (p'' - p'')^2) + 2h'(q''p'' - q'p'')] &= -0,000002 (\bar{6},3962436), \\
 (m'', m'')_{16} [l'((q'' - q'')^2 + (p'' - p'')^2) + 2h'(q''p'' - q'p'')] &= 0,000002 (\bar{6},4113597),
 \end{aligned}$$

$$\frac{1}{2} (m'' m') l'' (l''^2 + h''^2) = -0,000000 (\bar{7}, 1047599),$$

$$\frac{1}{2} [m'' m'] l'' (l''^2 + h''^2) = 0,000000 (\bar{9}, 7048211).$$

Слѣд. сумма членовъ перваго порядка = $-0,000939$,

« « « третьяго порядка = $-0,000003$.

Земля и Уранъ.

$$(m'' m') l'' = -0,000021, \quad (m'' m') l'' = -0,000023,$$

$$(m'' m')_1 l'' [l''^2 + h''^2 - (q'' - q')^2 - (p'' - p')^2] = 0,000000 (\bar{10}, 2424179),$$

$$(m'' m')_4 l'' [l''^2 + h''^2 + (q'' - q')^2 - (p'' - p')^2] = -0,000000 (\bar{8}, 8098597),$$

$$(m'' m')_2 l'' (l''^2 + h''^2) = 0,000000 (\bar{9}, 1801547),$$

$$(m'' m')_3 l'' (l''^2 + h''^2) = -0,000000 (\bar{9}, 1899456),$$

$$(m'' m')_5 [2l'' (l'' l'' + h'' h') + l'' (l''^2 + h''^2)] = -0,000000 (\bar{7}, 0300182),$$

$$(m'' m')_6 [2l'' (l'' l'' + h'' h') + l'' (l''^2 + h''^2)] = 0,000000 (\bar{7}, 0277820),$$

$$(m'' m')_7 l'' (l''^2 + h''^2) = 0,000000 (\bar{8}, 6525813),$$

$$(m'' m')_8 l'' (l''^2 + h''^2) = 0,000000 (\bar{8}, 9035224),$$

$$(m'' m')_9 [l'' (l''^2 - h''^2) + 2l'' h'' h'] = 0,000000 (\bar{7}, 3006060),$$

$$\frac{1}{2} (m'' m')_4 [l'' (l''^2 - h''^2) + 2l'' h'' h'] = -0,000000 (\bar{7}, 0820289),$$

$$(m'' m')_{10} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p'' (q'' - q'))] = -0,000000 (\bar{7}, 9019054),$$

$$(m'' m')_{11} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p'' (q'' - p'))] = -0,000000 (\bar{7}, 9098715),$$

$$(m'' m')_{12} [l'' (p'' - p')^2 - h'' (q'' (p'' - p') - p'' (q'' - q'))] = -0,000000 (\bar{9}, 3929946),$$

$$(m'' m')_{13} [l'' ((q'' - q')^2 - (p'' - p')^2) + 2h'' (p'' - p') (q'' - q')] = -0,000000 (\bar{8}, 0891679),$$

$$(m'' m')_{14} [l'' ((q'' - q')^2 - (p'' - p')^2) + 2h'' (p'' - p') (q'' - q')] = 0,000000 (\bar{8}, 4578111),$$

$$(m'' m')_{15} [l'' ((q'' - q')^2 + (p'' - p')^2) + 2h'' (q'' p'' - q'' p')] = 0,000000 (\bar{7}, 7898872),$$

$$(m'' m')_{16} [l'' ((q'' - q')^2 + (p'' - p')^2) + 2h'' (q'' p'' - q'' p')] = -0,000000 (\bar{7}, 7935863),$$

$$\frac{1}{2} (m'' m') l'' (l''^2 + h''^2) = -0,000000 (\bar{9}, 4799965),$$

$$\frac{1}{2} [m'' m'] l'' (l''^2 + h''^2) = -0,000000 (\bar{9}, 5089395).$$

Слѣд. сумма членовъ перваго порядка = $0,000002$,

« « « третьяго порядка = $0,000000$.

Марсъ и Меркурій.

$$(m''' m) l''' = 0,001041, \quad [m''' m] l = 0,000220,$$

$$(m''' m)_1 l''' [l^2 + h^2 - (q''' - q)^2 - (p''' - p)^2] = -0,000003 (\bar{6}, 5359127),$$

$$\begin{aligned}
(m''', m)_4 l''' [l'^2 + h'^2 - (q''' - q)^2 - (p''' - p)^2] &= -0,000066 (\bar{5}, 8217048), \\
(m''', m)_2 l''' (l'''^2 + h'''^2) &= -0,000002 (\bar{6}, 3890469), \\
(m''', m)_3 l''' (l'''^2 + h'''^2) &= 0,000004 (\bar{6}, 5846937), \\
(m''', m)_5 [2l''' (l'l''' + h'h''') + l(l'''^2 + h'''^2)] &= 0,000004 (\bar{6}, 6440062), \\
(m''', m)_6 [2l''' (l'l''' + h'h''') + l(l'''^2 + h'''^2)] &= -0,000004 (\bar{6}, 5723271), \\
(m''', m)_7 l(l'^2 + h'^2) &= -0,000009 (\bar{6}, 9635010), \quad (m''', m)_8 l(l'^2 + h'^2) = 0,000017 (\bar{5}, 2383613), \\
(m''', m)_9 [l''' (l'^2 - h'^2) + 2lh'h'''] &= 0,000065 (\bar{5}, 8108648), \\
\frac{1}{2} (m''', m)_4 [l''' (l'^2 - h'^2) + 2lh'h'''] &= -0,000046 (\bar{5}, 6658512), \\
(m''', m)_{10} [l(p''' - p)^2 - h(q(p - p''') - p'''(q - q'''))] &= -0,000016 (\bar{5}, 2083306), \\
(m''', m)_{11} [l(p''' - p)^2 - h(q(p - p''') - p'''(q - q'''))] &= -0,000025 (\bar{5}, 3977351), \\
(m''', m)_{12} [l(p''' - p)^2 - h(q(p - p''') - p'''(q - q'''))] &= 0,000002 (\bar{6}, 2088539), \\
(m''', m)_{13} [l''' ((q''' - q)^2 - (p''' - p)^2) + 2h''' (p - p''') (q - q''')] &= 0,000004 (\bar{6}, 5788481), \\
(m''', m)_{14} [l''' ((q''' - q)^2 - (p''' - p)^2) + 2h''' (p - p''') (q - q''')] &= -0,000009 (\bar{6}, 9633898), \\
(m''', m)_{15} [l((q''' - q)^2 + (p''' - p)^2) + 2h(q'''p - qp''')] &= -0,000009 (\bar{6}, 9976968), \\
(m''', m)_{16} [l((q''' - q)^2 + (p''' - p)^2) + 2h(q'''p - qp''')] &= 0,000012 (\bar{5}, 0925840), \\
\frac{1}{2} (m''', m) l''' (l'''^2 + h'''^2) &= 0,000004 (\bar{6}, 6553384), \quad \frac{1}{2} [m''', m] l(l'''^2 + h'''^2) = 0,000000 (\bar{7}, 9811026).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000821,

« « « третьяго порядка = 0,000219.

Марсъ и Венера.

$$\begin{aligned}
(m''', m') l''' &= 0,038734, \quad [m''', m'] l' = -0,001158, \\
(m''', m')_1 l''' [l'^2 + h'^2 - (q''' - q')^2 - (p''' - p')^2] &= 0,000025 (\bar{5}, 3934856), \\
(m''', m')_4 l''' [l'^2 + h'^2 - (q''' - q')^2 - (p''' - p')^2] &= -0,000146 (\bar{4}, 1658109), \\
(m''', m')_2 l''' (l'''^2 + h'''^2) &= -0,000130 (\bar{4}, 1138897), \\
(m''', m')_3 l''' (l'''^2 + h'''^2) &= 0,000393 (\bar{4}, 5949569), \\
(m''', m')_5 [2l''' (l'l''' + h'h''') + l(l'''^2 + h'''^2)] &= 0,000079 (\bar{5}, 8998485), \\
(m''', m')_6 [2l''' (l'l''' + h'h''') + l(l'''^2 + h'''^2)] &= -0,000012 (\bar{5}, 0731807), \\
(m''', m')_7 l'(l'^2 + h'^2) &= 0,000000 (\bar{8}, 8533327), \\
(m''', m')_8 l'(l'^2 + h'^2) &= -0,000000 (\bar{7}, 1869354), \\
(m''', m')_9 [l''' (l'^2 - h'^2) + 2l'h'h'''] &= -0,000000 (\bar{7}, 9163073),
\end{aligned}$$

$$\begin{aligned}
& \frac{1}{2} (m''', m')_4 [l''' (l'^2 - h'^2) + 2l'h'h'''] = 0,000000 (\bar{7},9539136), \\
& (m''', m')_{10} [l' (p''' - p')^2 - h' (q' (p' - p''') - p''' (q' - q'''))] = -0,000003 (\bar{6},5234162), \\
& (m''', m')_{11} [l' (p''' - p')^2 - h' (q' (p' - p''') - p''' (q' - q'''))] = -0,000016 (\bar{5},1991278), \\
& (m''', m')_{12} [l' (p''' - p')^2 - h' (q' (p' - p''') - p''' (q' - q'''))] = 0,000003 (\bar{6},4465089), \\
& (m''', m')_{13} [l''' ((q''' - q')^2 - (p''' - p')^2) + 2h''' (p' - p''') (q' - q''')] = 0,000039 (\bar{5},5876895), \\
& (m''', m')_{14} [l''' ((q''' - q')^2 - (p''' - p')^2) + 2h''' (p' - p''') (q' - q''')] = -0,000213 (\bar{4},3279945), \\
& (m''', m')_{15} [l' ((q''' - q')^2 + (p''' - p')^2) + 2h' (q''' p' - q' p''')] = -0,000002 (\bar{6},2817133), \\
& (m''', m')_{16} [l' ((q''' - q')^2 + (p''' - p')^2) + 2h' (q''' p' - q' p''')] = 0,000005 (\bar{6},7017741), \\
& \frac{1}{2} (m''', m') l''' (l''^2 + h''^2) = 0,000168 (\bar{4},2260367), \\
& \frac{1}{2} [m''', m'] l' (l'''^2 + h'''^2) = -0,000005 (\bar{6},7017115).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,039892,

« « « третьяго порядка = 0,000459.

Марсъ и Земля.

$$\begin{aligned}
& (m''', m'') l''' = 0,148853, \quad [m''', m''] l'' = -0,003844, \\
& (m''', m'')_1 l''' [l''^2 + h''^2 - (q''' - q'')^2 - (p''' - p'')^2] = 0,000226 (\bar{4},3551151), \\
& (m''', m'')_4 l''' [l''^2 + h''^2 - (q''' - q'')^2 - (p''' - p'')^2] = -0,000887 (\bar{4},9477562), \\
& (m''', m'')_2 l''' (l'''^2 + h'''^2) = -0,001123 (\bar{3},0505153), \\
& (m''', m'')_3 l''' (l'''^2 + h'''^2) = 0,004721 (\bar{3},6740196), \\
& (m''', m'')_5 [2l''' (l' l'' + h' h'') + l'' (l'''^2 + h'''^2)] = 0,000506 (\bar{4},7042566), \\
& (m''', m'')_6 [2l''' (l' l'' + h' h'') + l'' (l'''^2 + h'''^2)] = 0,000650 (\bar{4},8127070), \\
& (m''', m'')_7 l'' (l''^2 + h''^2) = 0,000002 (\bar{6},3801781), \\
& (m''', m'')_8 l'' (l''^2 + h''^2) = -0,000006 (\bar{6},7782851), \\
& (m''', m'')_9 [l''' (l''^2 - h''^2) + 2l' h' h''] = 0,000073 (\bar{5},8638578), \\
& \frac{1}{2} (m''', m'')_4 [l''' (l''^2 - h''^2) + 2l' h' h''] = -0,000127 (\bar{4},1035561), \\
& (m''', m'')_{10} [l'' (p''' - p'')^2 - h'' (q'' (p'' - p''') - p''' (q'' - q'''))] = -0,000006 (\bar{6},8074376), \\
& (m''', m'')_{11} [l'' (p''' - p'')^2 - h'' (q'' (p'' - p''') - p''' (q'' - q'''))] = -0,000154 (\bar{4},1864266), \\
& (m''', m'')_{12} [l'' (p''' - p'')^2 - h'' (q'' (p'' - p''') - p''' (q'' - q'''))] = 0,000040 (\bar{5},6014930), \\
& (m''', m'')_{13} [l''' ((q''' - q'')^2 - (p''' - p'')^2) + 2h''' (p'' - p''') (q'' - q''')] = 0,000206 (\bar{4},3149503), \\
& (m''', m'')_{14} [l''' ((q''' - q'')^2 - (p''' - p'')^2) + 2h''' (p'' - p''') (q'' - q''')] = -0,000580 (\bar{4},7636667), \\
& (m''', m'')_{15} [l'' ((q''' - q'')^2 + (p''' - p'')^2) + 2h'' (q''' p'' - q'' p''')] = 0,000000 (\bar{8},2531469),
\end{aligned}$$

$$(m''', m'')_{16} [l' (q''' - q'')^2 + (p''' - p'')^2 + 2h'' (q''' p'' - q'' p''')] = - 0,000023 (\bar{5}, 3691153),$$

$$\frac{1}{2} (m''', m'') l''' (l''^2 + h''^2) = 0,000647 (\bar{4}, 8106975),$$

$$\frac{1}{2} (m''', m'') l'' (l'''^2 + h'''^2) = - 0,000017 (\bar{5}, 2227380).$$

Слѣд. сумма членовъ перваго порядка = 0,152697,

« « « третьяго порядка = 0,004080.

Марсъ и Юпитеръ.

$$(m''', m^{IV}) l''' = 1,208393, \quad [m''', m^{IV}] l^{IV} = 0,250309,$$

$$(m''', m^{IV})_1 l''' [l^{IV2} + h^{IV2} - (q^{IV} - q''')^2 - (p^{IV} - p''')^2] = - 0,000315 (\bar{4}, 4981376),$$

$$(m''', m^{IV})_4 l''' [l^{IV2} + h^{IV2} - (q^{IV} - q''')^2 - (p^{IV} - p''')^2] = 0,004116 (\bar{3}, 6145507),$$

$$(m''', m^{IV})_2 l''' (l''^2 + h''^2) = - 0,002940 (\bar{3}, 4684192),$$

$$(m''', m^{IV})_3 l''' (l'''^2 + h'''^2) = 0,005191 (\bar{3}, 7152214),$$

$$(m''', m^{IV})_5 [2l''' (l''' l^{IV} + h''' h^{IV}) + l^{IV} (l'''^2 + h'''^2)] = - 0,025609 (\bar{2}, 4083969),$$

$$(m''', m^{IV})_6 [2l''' (l''' l^{IV} + h''' h^{IV}) + l^{IV} (l'''^2 + h'''^2)] = 0,020052 (\bar{2}, 3021661),$$

$$(m''', m^{IV})_7 l^{IV} (l^{IV2} + h^{IV2}) = - 0,000592 (\bar{4}, 7722561),$$

$$(m''', m^{IV})_8 l^{IV} (l^{IV2} + h^{IV2}) = 0,001135 (\bar{3}, 0551803),$$

$$(m''', m^{IV})_9 [l''' (l^{IV2} - h^{IV2}) + 2l^{IV} h^{IV} h'''] = - 0,002704 (\bar{3}, 4320658),$$

$$\frac{1}{2} (m''', m^{IV})_4 [l''' (l^{IV2} - h^{IV2}) + 2l^{IV} h^{IV} h'''] = 0,002051 (\bar{3}, 3118885),$$

$$(m''', m^{IV})_{10} [l^{IV} (p^{IV} - p''')^2 - h^{IV} (q^{IV} (p^{IV} - p''') - p''' (q^{IV} - q'''))] = - 0,000158 (\bar{4}, 1993509),$$

$$(m''', m^{IV})_{11} [l^{IV} (p^{IV} - p''')^2 - h^{IV} (q^{IV} (p^{IV} - p''') - p''' (q^{IV} - q'''))] = - 0,000283 (\bar{4}, 4513774),$$

$$(m''', m^{IV})_{12} [l^{IV} (p^{IV} - p''')^2 - h^{IV} (q^{IV} (p^{IV} - p''') - p''' (q^{IV} - q'''))] = 0,000023 (\bar{5}, 3705996),$$

$$(m''', m^{IV})_{13} [l''' ((q^{IV} - q''')^2 - (p^{IV} - p''')^2) + 2h''' (p^{IV} - p''') (q^{IV} - q''')] = - 0,000940 (\bar{4}, 9732479),$$

$$(m''', m^{IV})_{14} [l''' ((q^{IV} - q''')^2 - (p^{IV} - p''')^2) + 2h''' (p^{IV} - p''') (q^{IV} - q''')] = 0,001518 (\bar{3}, 1813704),$$

$$(m''', m^{IV})_{15} [l^{IV} ((q^{IV} - q''')^2 + (p^{IV} - p''')^2) + 2h^{IV} (q''' p^{IV} - q^{IV} p''')] = - 0,001006 (\bar{3}, 0027497),$$

$$(m''', m^{IV})_{16} [l^{IV} ((q^{IV} - q''')^2 + (p^{IV} - p''')^2) + 2h^{IV} (q''' p^{IV} - q^{IV} p''')] = 0,001356 (\bar{3}, 1323442),$$

$$\frac{1}{2} (m''', m^{IV}) l''' (l''^2 + h''^2) = 0,005250 (\bar{3}, 7201483),$$

$$\frac{1}{2} [m''', m^{IV}] l^{IV} (l'''^2 + h'''^2) = 0,001087 (\bar{3}, 0364177).$$

Слѣд. сумма членовъ перваго порядка = 0,958084,

« « « третьяго порядка = - 0,006474.

Марсъ и Сатурнъ.

$$\begin{aligned}
(m''', m'') l''' &= 0,051996, & [m''', m''] l'' &= 0,000106, \\
(m''', m'')_1 l''' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= -0,000003 (\bar{6}, 4822021), \\
(m''', m'')_4 l''' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= 0,000123 (\bar{4}, 0904995), \\
(m''', m'')_2 l''' (l''^2 + h''^2) &= -0,000116 (\bar{4}, 0649749), \\
(m''', m'')_3 l''' (l''^2 + h''^2) &= 0,000141 (\bar{4}, 1508619), \\
(m''', m'')_5 [2l''' (l'' l' + h'' h') + l' (l''^2 + h''^2)] &= 0,000758 (\bar{4}, 8798142), \\
(m''', m'')_6 [2l''' (l'' l' + h'' h') + l' (l''^2 + h''^2)] &= -0,000718 (\bar{4}, 8563922), \\
(m''', m'')_7 l' (l'^2 + h'^2) &= -0,000003 (\bar{6}, 4924150), \\
(m''', m'')_8 l' (l'^2 + h'^2) &= 0,000000 (\bar{7}, 7522483), \\
(m''', m'')_9 [l''' (l'^2 - h'^2) + 2l' h' h'''] &= 0,000211 (\bar{4}, 3251350), \\
\frac{1}{2} (m''', m'')_4 [l''' (l'^2 - h'^2) + 2l' h' h'''] &= -0,000136 (\bar{4}, 1338905), \\
(m''', m'')_{10} [l' (p' - p'')^2 - h' (q' (p' - p'') - p''' (q' - q''))] &= -0,000090 (\bar{5}, 9547713), \\
(m''', m'')_{11} [l' (p' - p'')^2 - h' (q' (p' - p'') - p''' (q' - q''))] &= -0,000107 (\bar{4}, 0295571), \\
(m''', m'')_{12} [l' (p' - p'')^2 - h' (q' (p' - p'') - p''' (q' - q''))] &= 0,000003 (\bar{6}, 4671751), \\
(m''', m'')_{13} [l''' ((q' - q'')^2 - (p' - p'')^2) + 2h''' (p' - p'') (q' - q'')] &= -0,000074 (\bar{5}, 8692960), \\
(m''', m'')_{14} [l''' ((q' - q'')^2 - (p' - p'')^2) + 2h''' (p' - p'') (q' - q'')] &= 0,000175 (\bar{4}, 2434591), \\
(m''', m'')_{15} [l' ((q' - q'')^2 + (p' - p'')^2) + 2h' (q''' p' - q' p''')] &= -0,000284 (\bar{4}, 4532984), \\
(m''', m'')_{16} [l' ((q' - q'')^2 + (p' - p'')^2) + 2h' (q''' p' - q' p''')] &= 0,000308 (\bar{4}, 4890226), \\
\frac{1}{2} (m''', m'') l''' (l''^2 + h''^2) &= 0,000226 (\bar{4}, 3539106), \\
\frac{1}{2} [m''', m''] l' (l''^2 + h''^2) &= 0,000000 (\bar{7}, 6621445).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,051890,

« « « третьяго порядка = -0,000270.

Марсъ и Уранъ.

$$\begin{aligned}
(m''', m'^I) l''' &= 0,001208, & [m''', m'^I] l'^I &= -0,000066, \\
(m''', m'^I)_1 l''' [l'^{I2} + h'^{I2} - (q'^I - q''')^2 - (p'^I - p''')^2] &= -0,000000 (\bar{8}, 3034010), \\
(m''', m'^I)_4 l''' [l'^{I2} + h'^{I2} - (q'^I - q''')^2 - (p'^I - p''')^2] &= 0,000003 (\bar{6}, 5071869), \\
(m''', m'^I)_2 l''' (l''^2 + h''^2) &= -0,000003 (\bar{6}, 4218000),
\end{aligned}$$

$$\begin{aligned}
 (m, m^{VI})_3 l''' (l'^{VI2} + h'^{VI2}) &= 0,000003 (\bar{6}, 4442926), \\
 (m, m^{VI})_5 [2l''' (l'' l'^{VI} + h''' h'^{VI}) + l'^{VI} (l'^{VI2} + h'^{VI2})] &= 0,000043 (\bar{5}, 6320104), \\
 (m, m^{VI})_6 [2l''' (l'' l'^{VI} + h''' h'^{VI}) + l'^{VI} (l'^{VI2} + h'^{VI2})] &= -0,000042 (\bar{5}, 6267087), \\
 (m, m^{VI})_7 l'^{VI} (l'^{VI2} + h'^{VI2}) &= 0,000000 (\bar{7}, 1146843), \\
 (m, m^{VI})_8 l'^{VI} (l'^{VI2} + h'^{VI2}) &= -0,000000 (\bar{7}, 3670326), \\
 (m, m^{VI})_9 [l''' (l'^{VI2} - h'^{VI2}) + 2l'^{VI} h'^{VI} h'''] &= -0,000004 (\bar{6}, 5694904), \\
 \frac{1}{2} (m, m^{VI})_4 [l''' (l'^{VI2} - h'^{VI2}) + 2l'^{VI} h'^{VI} h'''] &= 0,000002 (\bar{6}, 3552363), \\
 (m, m^{VI})_{10} [l'^{VI} (p'^{VI} - p''')^2 - h'^{VI} (q'^{VI} (p'^{VI} - p''') - p''' (q'^{VI} - q'''))] &= -0,000001 (\bar{6}, 0570329), \\
 (m, m^{VI})_{11} [l'^{VI} (p'^{VI} - p''')^2 - h'^{VI} (q'^{VI} (p'^{VI} - p''') - p''' (q'^{VI} - p'''))] &= -0,000001 (\bar{6}, 0755259), \\
 (m, m^{VI})_{12} [l'^{VI} (p'^{VI} - p''')^2 - h'^{VI} (q'^{VI} (p'^{VI} - p''') - p''' (q'^{VI} - q'''))] &= 0,000000 (\bar{9}, 9215419), \\
 (m, m^{VI})_{13} [l''' ((q'^{VI} - q''')^2 - (p'^{VI} - p''')^2) + 2h''' (p'^{VI} - p''') (q'^{VI} - q''')] &= 0,000000 (\bar{8}, 1620589), \\
 (m, m^{VI})_{14} [l''' ((q'^{VI} - q''')^2 - (p'^{VI} - p''')^2) + 2h''' (p'^{VI} - p''') (q'^{VI} - q''')] &= -0,000000 (\bar{8}, 3315804), \\
 (m, m^{VI})_{15} [l'^{VI} ((q'^{VI} - q''')^2 + (p'^{VI} - p''')^2) + 2h'^{VI} (q''' p'^{VI} - q'^{VI} p''')] &= 0,000001 (\bar{6}, 1715918), \\
 (m, m^{VI})_{16} [l'^{VI} ((q'^{VI} - q''')^2 + (p'^{VI} - p''')^2) + 2h'^{VI} (q''' p'^{VI} - q'^{VI} p''')] &= -0,000001 (\bar{6}, 1802204), \\
 \frac{1}{2} (m, m^{VI}) l''' (l'^{VI2} + h'^{VI2}) &= 0,000005 (\bar{6}, 7200292), \\
 \frac{1}{2} [m, m^{VI}] l'^{VI} (l'^{VI2} + h'^{VI2}) &= -0,000000 (\bar{7}, 4576840).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,001274,

« « « третьяго порядка = -0,000015.

Юпитеръ и Меркурій.

$$\begin{aligned}
 (m, m^{IV}) l^{IV} &= 0,000007, \quad [m, m^{IV}] l = 0,000000, \\
 (m, m^{IV})_1 l^{IV} [l^2 + h^2 - (q - q^{IV})^2 - (p - p^{IV})^2] &= -0,000000 (\bar{9}, 2609838), \\
 (m, m^{IV})_4 l^{IV} [l^2 + h^2 - (q - q^{IV})^2 - (p - p^{IV})^2] &= 0,000000 (\bar{7}, 5211132), \\
 (m, m^{IV})_2 l^{IV} (l'^{IV2} + h'^{IV2}) &= -0,000000 (\bar{9}, 6240266), \\
 (m, m^{IV})_3 l^{IV} (l'^{IV2} + h'^{IV2}) &= 0,000000 (\bar{9}, 6438089), \\
 (m, m^{IV})_5 [2l^{IV} (ll^{IV} + hh^{IV}) + l (l'^{IV2} + h'^{IV2})] &= -0,000000 (\bar{7}, 7527492), \\
 (m, m^{IV})_6 [2l^{IV} (ll^{IV} + hh^{IV}) + l (l'^{IV2} + h'^{IV2})] &= 0,000000 (\bar{7}, 7481235), \\
 (m, m^{IV})_7 l (l^2 + h^2) &= -0,000000 (\bar{8}, 4801089), \quad (m, m^{IV})_8 l (l^2 + h^2) = 0,000000 (\bar{8}, 7321549), \\
 (m, m^{IV})_9 [l^{IV} (l^2 - h^2) + 2lhh^{IV}] &= -0,000000 (\bar{8}, 8093515), \\
 \frac{1}{2} (m, m^{IV})_4 [l^{IV} (l^2 - h^2) + 2lhh^{IV}] &= 0,000000 (\bar{8}, 5941674),
 \end{aligned}$$

*

$$\begin{aligned}
(m^{IV}, m)_{10} [l(p - p^{IV})^2 - h(q(p - p^{IV}) - p^{IV}(q - q^{IV}))] &= -0,000000 (\bar{7},8047881), \\
(m^{IV}, m)_{11} [l(p - p^{IV})^2 - h(q(p - p^{IV}) - p^{IV}(q - q^{IV}))] &= 0,000000 (\bar{7},8210140), \\
(m^{IV}, m)_{12} [l(p - p^{IV})^2 - h(q(p - p^{IV}) - p^{IV}(q - q^{IV}))] &= 0,000000 (\bar{9},6108487), \\
(m^{IV}, m)_{13} [l^{IV}((q - q^{IV})^2 - (p - p^{IV})^2) + 2h^{IV}(p - p^{IV})(q - q^{IV})] &= -0,000000 (\bar{7},1601448), \\
(m^{IV}, m)_{14} [l^{IV}((q - q^{IV})^2 - (p - p^{IV})^2) + 2h^{IV}(p - p^{IV})(q - q^{IV})] &= 0,000000 (\bar{7},5294763), \\
(m^{IV}, m)_{15} [l((q - q^{IV})^2 + (p - p^{IV})^2) + 2h(q^{IV}p - qp^{IV})] &= 0,000000 (\bar{7},3317653), \\
(m^{IV}, m)_{16} [l((q - q^{IV})^2 + (p - p^{IV})^2) + 2h(q^{IV}p - qp^{IV})] &= -0,000000 (\bar{7},3393290), \\
\frac{1}{2} (m^{IV}, m) l^{IV} (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{9},9226058), \\
\frac{1}{2} [m^{IV}, m] l (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{10},9608483).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000007,

« « « третьяго порядка = 0,000000.

Юпитеръ и Венера.

$$\begin{aligned}
(m^{IV}, m') l^{IV} &= 0,000193, \quad [m^{IV}, m'] l' = -0,000003, \\
(m^{IV}, m')_1 l^{IV} [l'^2 + h'^2 - (q' - q^{IV})^2 - (p' - p^{IV})^2] &= 0,000000 (\bar{9},9406796), \\
(m^{IV}, m')_4 l^{IV} [l'^2 + h'^2 - (q' - q^{IV})^2 - (p' - p^{IV})^2] &= -0,000000 (\bar{7},6659412), \\
(m^{IV}, m')_2 l^{IV} (l^{IV2} + h^{IV2}) &= -0,000000 (\bar{7},0580192), \\
(m^{IV}, m')_3 l^{IV} (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{7},1242595), \\
(m^{IV}, m')_5 [2l^{IV} (l'l^{IV} + h'h^{IV}) + l' (l^{IV2} + h^{IV2})] &= 0,000000 (\bar{7},5571661), \\
(m^{IV}, m')_6 [2l^{IV} (l'l^{IV} + h'h^{IV}) + l' (l^{IV2} + h^{IV2})] &= -0,000000 (\bar{7},2389058), \\
(m^{IV}, m')_7 l' (l'^2 + h'^2) &= 0,000000 (\bar{10},1208029), \\
(m^{IV}, m')_8 l' (l'^2 + h'^2) &= -0,000000 (\bar{10},3782313), \\
(m^{IV}, m')_9 [l^{IV} (l'^2 - h'^2) + 2l'h'h^{IV}] &= 0,000000 (\bar{9},6677008), \\
\frac{1}{2} (m^{IV}, m')_4 [l^{IV} (l'^2 - h'^2) + 2l'h'h^{IV}] &= -0,000000 (\bar{9},4690625), \\
(m^{IV}, m')_{10} [l' (p' - p^{IV})^2 - h' (q' (p' - p^{IV}) - p^{IV} (q' - q^{IV}))] &= -0,000000 (\bar{7},0306001), \\
(m^{IV}, m')_{11} [l' (p' - p^{IV})^2 - h' (q' (p' - p^{IV}) - p^{IV} (q' - q^{IV}))] &= -0,000000 (\bar{7},0872503), \\
(m^{IV}, m')_{12} [l' (p' - p^{IV})^2 - h' (q' (p' - p^{IV}) - p^{IV} (q' - q^{IV}))] &= 0,000000 (\bar{9},4091199), \\
(m^{IV}, m')_{13} [l^{IV} ((q' - q^{IV})^2 - (p' - p^{IV})^2) + 2h^{IV} (p' - p^{IV}) (q' - q^{IV})] &= 0,000000 (\bar{8},9385131), \\
(m^{IV}, m')_{14} [l^{IV} ((q' - q^{IV})^2 - (p' - p^{IV})^2) + 2h^{IV} (p' - p^{IV}) (q' - q^{IV})] &= -0,000000 (\bar{7},3111911),
\end{aligned}$$

$$\begin{aligned}
(m', m')_{15} [l' ((q' - q^{IV})^2 + (p' - p^{IV})^2) + 2h' (q^{IV} p' - q' p^{IV})] &= 0,000000 (\bar{7}, 2637443), \\
(m', m')_{16} [l' ((q' - q^{IV})^2 + (p' - p^{IV})^2) + 2h' (q^{IV} p' - q' p^{IV})] &= -0,000000 (\bar{7}, 2906072), \\
\frac{1}{2} (m', m') l^{IV} (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{7}, 3500773), \\
\frac{1}{2} [m', m'] l' (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{9}, 5472112).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000196,

« « « третьяго порядка = 0,000000.

Юпитеръ и Земля.

$$\begin{aligned}
(m', m'') l^{IV} &= 0,000427, \quad [m', m''] l'' = -0,000006, \\
(m', m'')_1 l^{IV} [l'^2 + h'^2 - (q'' - q^{IV})^2 - (p'' - p^{IV})^2] &= 0,000000 (\bar{9}, 7948952), \\
(m', m'')_4 l^{IV} [l'^2 + h'^2 - (q'' - q^{IV})^2 - (p'' - p^{IV})^2] &= -0,000000 (\bar{7}, 2491454), \\
(m', m'')_2 l^{IV} (l^{IV2} + h^{IV2}) &= -0,000000 (\bar{7}, 4119123), \\
(m', m'')_3 l^{IV} (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{7}, 5323257), \\
(m', m'')_5 [2l^{IV} (l' l^{IV} + h' h^{IV}) + l' (l^{IV2} + h^{IV2})] &= 0,000000 (\bar{7}, 0077621), \\
(m', m'')_6 [2l^{IV} (l' l^{IV} + h' h^{IV}) + l' (l^{IV2} + h^{IV2})] &= -0,000000 (\bar{9}, 9719424), \\
(m', m'')_7 l' (l'^2 + h'^2) &= 0,000000 (\bar{9}, 2044117), \\
(m', m'')_8 l' (l'^2 + h'^2) &= -0,000000 (\bar{9}, 4686714), \\
(m', m'')_9 [l^{IV} (l'^2 - h'^2) + 2l' h' h^{IV}] &= 0,000000 (\bar{8}, 8905540), \\
\frac{1}{2} (m', m'')_4 [l^{IV} (l'^2 - h'^2) + 2l' h' h^{IV}] &= -0,000000 (\bar{7}, 0139501), \\
(m', m'')_{10} [l'' (p'' - p^{IV})^2 - h'' (q'' (p'' - p^{IV}) - p^{IV} (q'' - q^{IV}))] &= -0,000000 (\bar{9}, 6803312), \\
(m', m'')_{11} [l'' (p'' - p^{IV})^2 - h'' (q'' (p'' - p^{IV}) - p^{IV} (q'' - q^{IV}))] &= -0,000000 (\bar{9}, 7886307), \\
(m', m'')_{12} [l'' (p'' - p^{IV})^2 - h'' (q'' (p'' - p^{IV}) - p^{IV} (q'' - q^{IV}))] &= 0,000000 (\bar{10}, 3781362), \\
(m', m'')_{13} [l^{IV} ((q'' - q^{IV})^2 - (p'' - p^{IV})^2) + 2h^{IV} (p'' - p^{IV}) (q'' - q^{IV})] &= 0,000000 (\bar{7}, 2084535), \\
(m', m'')_{14} [l^{IV} ((q'' - q^{IV})^2 - (p'' - p^{IV})^2) + 2h^{IV} (p'' - p^{IV}) (q'' - q^{IV})] &= -0,000000 (\bar{7}, 5853350), \\
(m', m'')_{15} [l'' ((q'' - q^{IV})^2 + (p'' - p^{IV})^2) + 2h'' (q^{IV} p'' - q'' p^{IV})] &= 0,000000 (\bar{8}, 5382020), \\
(m', m'')_{16} [l'' ((q'' - q^{IV})^2 + (p'' - p^{IV})^2) + 2h'' (q^{IV} p'' - q'' p^{IV})] &= -0,000000 (\bar{8}, 5906611), \\
\frac{1}{2} (m', m'') l^{IV} (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{7}, 6947519), \\
\frac{1}{2} [m', m''] l' (l^{IV2} + h^{IV2}) &= -0,000000 (\bar{9}, 8420168).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000435,

« « « третьяго порядка = 0,000000.

Юпитеръ и Марсъ.

$$\begin{aligned}
(m, m'') l'' &= 0,000146, & [m, m''] &= 0,000093, \\
(m, m'')_1 l'' [l''^2 + h''^2 - (q''' - q'')^2 - (p''' - p'')^2] &= -0,000000 (\bar{7}, 2597957), \\
(m, m'')_4 l'' [l''^2 + h''^2 - (q''' - q'')^2 - (p''' - p'')^2] &= 0,000002 (\bar{6}, 3762088), \\
(m, m'')_2 l'' (l''^2 + h''^2) &= -0,000000 (\bar{8}, 9785433), \\
(m, m'')_3 l'' (l''^2 + h''^2) &= 0,000000 (\bar{7}, 2253456), \\
(m, m'')_5 [2l'' (l'' l'' + h'' h'') + l'' (l''^2 + h''^2)] &= -0,000003 (\bar{6}, 4574851), \\
(m, m'')_6 [2l'' (l'' l'' + h'' h'') + l'' (l''^2 + h''^2)] &= 0,000002 (\bar{6}, 3512543), \\
(m, m'')_7 l'' (l''^2 + h''^2) &= -0,000000 (\bar{7}, 9146957), \\
(m, m'')_8 l'' (l''^2 + h''^2) &= 0,000001 (\bar{6}, 1976193), \\
(m, m'')_9 [l'' (l''^2 - h''^2) + 2l'' h'' h''] &= -0,000000 (\bar{7}, 8391880), \\
\frac{1}{2} (m, m'')_4 [l'' (l''^2 - h''^2) + 2l'' h'' h''] &= 0,000000 (\bar{7}, 7190107), \\
(m, m'')_{10} [l'' (p''' - p'')^2 - h'' (q''' (p''' - p'') - p'' (q''' - q''))] &= -0,000000 (\bar{7}, 1398091), \\
(m, m'')_{11} [l'' (p''' - p'')^2 - h'' (q''' (p''' - p'') - p'' (q''' - q''))] &= -0,000000 (\bar{7}, 3918362), \\
(m, m'')_{12} [l'' (p''' - p'')^2 - h'' (q''' (p''' - p'') - p'' (q''' - q''))] &= 0,000000 (\bar{8}, 3110578), \\
(m, m'')_{13} [l'' ((q''' - q'')^2 - (p''' - p'')^2) + 2h'' (p''' - p'') (q''' - q'')] &= -0,000000 (\bar{7}, 0909713), \\
(m, m'')_{14} [l'' ((q''' - q'')^2 - (p''' - p'')^2) + 2h'' (p''' - p'') (q''' - q'')] &= 0,000000 (\bar{7}, 2990938), \\
(m, m'')_{15} [l'' ((q''' - q'')^2 + (p''' - p'')^2) + 2h'' (q'' p''' - q''' p'')] &= -0,000000 (\bar{7}, 7298996), \\
(m, m'')_{16} [l'' ((q''' - q'')^2 + (p''' - p'')^2) + 2h'' (q'' p''' - q''' p'')] &= 0,000000 (\bar{7}, 8594941), \\
\frac{1}{2} (m, m'') l'' (l''^2 + h''^2) &= 0,000000 (\bar{7}, 2302719), \\
\frac{1}{2} [m, m''] l'' [l''^2 + h''^2] &= 0,000000 (\bar{7}, 0315185).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000053,

« « « третьяго порядка = 0,000000.

Юпитеръ и Сатурнъ.

$$\begin{aligned}
(m, m') l' &= 0,348493, & [m, m'] l' &= 0,004068, \\
(m, m') l' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= -0,000342 (\bar{4}, 9254688), \\
(m, m')_4 l' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= 0,004111 (\bar{3}, 6140036), \\
(m, m')_2 l' (l'^2 + h'^2) &= -0,000369 (\bar{4}, 5980201), \\
(m, m')_3 l' (l'^2 + h'^2) &= 0,001412 (\bar{3}, 1499480),
\end{aligned}$$

$$\begin{aligned}
(m^{IV} m^V)_5 [2l^{IV} (l^{IV} l^V + h^{IV} h^V) + l^V (l^{IV2} + h^{IV2})] &= -0''000511 (\bar{4}, 7088218), \\
(m^{IV} m^V)_6 [2l^{IV} (l^{IV} l^V + h^{IV} h^V) + l^V (l^{IV2} + h^{IV2})] &= -0''001603 (\bar{3}, 2048896), \\
(m^{IV} m^V)_7 l^V (l^{IV2} + h^{IV2}) &= -0''000020 (\bar{5}, 2946821), \\
(m^{IV} m^V)_8 l^V (l^{IV2} + h^{IV2}) &= 0''000045 (\bar{5}, 6525207), \\
(m^{IV} m^V)_9 [l^{IV} (l^{IV2} - h^{IV2}) + 2l^V h^V h^{IV}] &= 0''001858 (\bar{3}, 2689815), \\
\frac{1}{2} (m^{IV} m^V)_4 [l^{IV} (l^{IV2} - h^{IV2}) + 2l^V h^V h^{IV}] &= -0''002409 (\bar{3}, 3817729), \\
(m^{IV} m^V)_{10} [l^V (p^V - p^{IV})^2 - h^V (q^V (p^V - p^{IV}) - p^{IV} (q^V - q^{IV}))] &= -0''000000 (\bar{8}, 8957946), \\
(m^{IV} m^V)_{11} [l^V (p^V - p^{IV})^2 - h^V (q^V (p^V - p^{IV}) - p^{IV} (q^V - q^{IV}))] &= -0''000000 (\bar{7}, 8039440), \\
(m^{IV} m^V)_{12} [l^V (p^V - p^{IV})^2 - h^V (q^V (p^V - p^{IV}) - p^{IV} (q^V - q^{IV}))] &= 0''000000 (\bar{7}, 1297906), \\
(m^{IV} m^V)_{13} [l^{IV} ((q^V - q^{IV})^2 - (p^V - p^{IV})^2) + 2h^{IV} (p^V - p^{IV}) (q^V - q^{IV})] &= 0''000116 (\bar{4}, 0634575), \\
(m^{IV} m^V)_{14} [l^{IV} ((q^V - q^{IV})^2 - (p^V - p^{IV})^2) + 2h^{IV} (p^V - p^{IV}) (q^V - q^{IV})] &= -0''000311 (\bar{4}, 4928440), \\
(m^{IV} m^V)_{15} [l^V ((q^V - q^{IV})^2 + (p^V - p^{IV})^2) + 2h^V (q^{IV} p^V - q^V p^{IV})] &= -0''000128 (\bar{4}, 1066390), \\
(m^{IV} m^V)_{16} [l^V ((q^V - q^{IV})^2 + (p^V - p^{IV})^2) + 2h^V (q^{IV} p^V - q^V p^{IV})] &= 0''000565 (\bar{4}, 7522178), \\
\frac{1}{2} (m^{IV} m^V) l^{IV} (l^{IV2} + h^{IV2}) &= 0''000404 (\bar{4}, 6064652), \\
\frac{1}{2} [m^{IV} m^V] l^V (l^{IV2} + h^{IV2}) &= 0''000005 (\bar{6}, 6736896).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0''344425,

« « « третьяго порядка = 0''002627.

Юпитеръ и Уранъ.

$$\begin{aligned}
(m^{IV} m^{VI}) l^{IV} &= 0''004977, \quad [m^{IV} m^{VI}] l^{VI} = -0''001610, \\
(m^{IV} m^{VI})_1 l^{IV} [l^{VI2} + h^{VI2} - (q^{VI} - q^{IV})^2 - (p^{VI} - p^{IV})^2] &= -0''000001 (\bar{6}, 1122163), \\
(m^{IV} m^{VI})_4 l^{IV} [l^{VI2} + h^{VI2} - (q^{VI} - q^{IV})^2 - (p^{VI} - p^{IV})^2] &= 0''000019 (\bar{5}, 2883916), \\
(m^{IV} m^{VI})_2 l^{IV} (l^{IV2} + h^{IV2}) &= -0''000003 (\bar{6}, 5009491), \\
(m^{IV} m^{VI})_3 l^{IV} (l^{IV2} + h^{IV2}) &= 0''000005 (\bar{6}, 7189824), \\
(m^{IV} m^{VI})_5 [2l^{IV} (l^{IV} l^{VI} + h^{IV} h^{VI}) + l^{VI} (l^{IV2} + h^{IV2})] &= 0''000060 (\bar{5}, 7777151), \\
(m^{IV} m^{VI})_6 [2l^{IV} (l^{IV} l^{VI} + h^{IV} h^{VI}) + l^{VI} (l^{IV2} + h^{IV2})] &= -0''000025 (\bar{5}, 3911561), \\
(m^{IV} m^{VI})_7 l^{VI} (l^{VI2} + h^{VI2}) &= 0''000003 (\bar{6}, 5439241), \\
(m^{IV} m^{VI})_8 l^{VI} (l^{VI2} + h^{VI2}) &= -0''000007 (\bar{6}, 8222193), \\
(m^{IV} m^{VI})_9 [l^{IV} (l^{VI2} - h^{VI2}) + 2l^{VI} h^{VI} h^{IV}] &= -0''000012 (\bar{5}, 0681646), \\
\frac{1}{2} (m^{IV} m^{VI})_4 [l^{IV} (l^{VI2} - h^{VI2}) + 2l^{VI} h^{VI} h^{IV}] &= 0''000008 (\bar{6}, 9337330),
\end{aligned}$$

$$\begin{aligned}
(m^{IV}, m^{VI})_{10} [l^{VI}(p^{VI} - p^{IV})^2 - h^{VI}(q^{VI}(p^{VI} - p^{IV}) - p^{IV}(q^{VI} - q^{IV}))] &= -0,000000(\bar{7},7087160), \\
(m^{IV}, m^{VI})_{11} [l^{VI}(p^{VI} - p^{IV})^3 - h^{VI}(q^{VI}(p^{VI} - p^{IV}) - p^{IV}(q^{VI} - q^{IV}))] &= -0,000000(\bar{7},9246994), \\
(m^{IV}, m^{VI})_{12} [l^{VI}(p^{VI} - p^{IV})^2 - h^{VI}(q^{VI}(p^{VI} - p^{IV}) - p^{IV}(q^{VI} - q^{IV}))] &= 0,000000(\bar{8},7860341), \\
(m^{IV}, m^{VI})_{13} [l^{IV}((q^{VI} - q^{IV})^2 - (p^{VI} - p^{IV})^2) + 2h^{IV}(p^{VI} - p^{IV})(q^{VI} - q^{IV})] &= 0,000000(\bar{7},4737940), \\
(m^{IV}, m^{VI})_{14} [l^{IV}((q^{VI} - q^{IV})^2 - (p^{VI} - p^{IV})^2) + 2h^{IV}(p^{VI} - p^{IV})(q^{VI} - q^{IV})] &= -0,000000(\bar{7},8591607), \\
(m^{IV}, m^{VI})_{15} [l^{VI}((q^{VI} - q^{IV})^2 + (p^{VI} - p^{IV})^2) + 2h^{VI}(q^{IV}p^{VI} - q^{VI}p^{IV})] &= 0,000002(\bar{6},2664837), \\
(m^{IV}, m^{VI})_{16} [l^{VI}((q^{VI} - q^{IV})^2 + (p^{VI} - p^{IV})^2) + 2h^{VI}(q^{IV}p^{VI} - q^{VI}p^{IV})] &= -0,000002(\bar{6},3758894), \\
\frac{1}{2}(m^{IV}, m^{VI}) l^{IV}(l^{IV2} + h^{IV2}) &= 0,000006(\bar{6},7612513), \\
\frac{1}{2}[m^{IV}, m^{IV}] l^{VI}(l^{IV2} + h^{IV2}) &= -0,000002(\bar{6},2710009).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,006587,

« « « третьяго порядка = -0,00087.

Сатурнъ и Меркурій.

$$\begin{aligned}
(m^I, m) l^V &= 0,000000, \quad [m^I, m] l = 0,000000, \\
(m^I, m)_1 l^V [l^2 + h^2 - (q^V - q)^2 - (p^V - p)^2] &= -0,000000(\bar{12},0517739), \\
(m^I, m)_4 l^V [l^2 + h^2 - (q^V - q)^2 - (p^V - p)^2] &= 0,000000(\bar{10},8361051), \\
(m^I, m)_2 l^V (l^{V2} + h^{V2}) &= -0,000000(\bar{11},0829160), \\
(m^I, m)_3 l^V (l^{V2} + h^{V2}) &= 0,000000(\bar{11},0888733), \\
(m^I, m)_5 [2l^V (ll^V + hh^V) + l(l^{V2} + h^{V2})] &= -0,000000(\bar{8},6376223), \\
(m^I, m)_6 [2l^V (ll^V + hh^V) + l(l^{V2} + h^{V2})] &= 0,000000(\bar{8},6362708), \\
(m^I, m)_7 l(l^2 + h^2) &= -0,000000(\bar{9},3360002), \quad (m^I, m)_8 l(l^2 + h^2) = 0,000000(\bar{9},5407098), \\
(m^I, m)_9 [l^V(l^2 - h^2) + 2lhh^V] &= -0,000000(\bar{8},4371091), \\
\frac{1}{2}(m^I, m)_4 [l^V(l^2 - h^2) + 2lhh^V] &= 0,000000(\bar{8},2172441), \\
(m^I, m)_{10} [l(p^V - p)^2 - h(q(p - p^V) - p^V(q - q^V))] &= 0,000000(\bar{8},5898028), \\
(m^I, m)_{11} [l(p^V - p)^2 - h(q(p - p^V) - p^V(q - q^V))] &= 0,000000(\bar{8},5946301), \\
(m^I, m)_{12} [l(p^V - p)^2 - h(q(p - p^V) - p^V(q - q^V))] &= -0,000000(\bar{11},8610952), \\
(m^I, m)_{13} [l^V((q - q^V)^2 - (p - p^V)^2) + 2h^V(p - p^V)(q - q^V)] &= -0,000000(\bar{9},8785178), \\
(m^I, m)_{14} [l^V((q - q^V)^2 - (p - p^V)^2) + 2h^V(p - p^V)(q - q^V)] &= 0,000000(\bar{8},2468985), \\
(m^I, m)_{15} [l((q - q^V)^2 + (p - p^V)^2) + 2h(q^Vp - qp^V)] &= 0,000000(\bar{7},4411403), \\
(m^I, m)_{16} [l((q - p^V)^2 + (p - p^V)^2) + 2h(q^Vp - qp^V)] &= -0,000000(\bar{7},4433799),
\end{aligned}$$

$$\frac{1}{2} (m', m) l' (l'^2 + h'^2) = 0,000000 (\overline{11}, 3832268),$$

$$\frac{1}{2} [m', m] l' (l'^2 + h'^2) = 0,000000 (\overline{10}, 9066236).$$

Слѣд. сумма членовъ перваго порядка = 0,000000,

« « « третьяго порядка = 0,000000.

Сатурнъ и Венера.

$$(m', m') l' = 0,000000, \quad [m', m'] l' = -0,000000,$$

$$(m', m')_1 l' [l'^2 + h'^2 - (q' - q')^2 - (p' - p')^2] = 0,000000 (\overline{12}, 6402621),$$

$$(m', m')_4 l' [l'^2 + h'^2 - (q' - q')^2 - (p' - p')^2] = -0,000000 (\overline{10}, 8840055),$$

$$(m', m')_2 l' (l'^2 + h'^2) = -0,000000 (\overline{10}, 5041917),$$

$$(m', m')_3 l' (l'^2 + h'^2) = 0,000000 (\overline{10}, 5247277),$$

$$(m', m')_5 [2l' (l' l' + h' h') + l' (l'^2 + h'^2)] = 0,000000 (\overline{8}, 6134504),$$

$$(m', m')_6 [2l' (l' l' + h' h') + l' (l'^2 + h'^2)] = -0,000000 (\overline{8}, 6086456),$$

$$(m', m')_7 l' (l'^2 + h'^2) = 0,000000 (\overline{12}, 9175558),$$

$$(m', m')_8 l' (l'^2 + h'^2) = -0,000000 (\overline{11}, 1696855),$$

$$(m', m')_9 [l' (l'^2 - h'^2) + 2l' h' h'] = 0,000000 (\overline{9}, 1888148),$$

$$\frac{1}{2} (m', m')_4 [l' (l'^2 - h'^2) + 2l' h' h'] = -0,000000 (\overline{10}, 9738887),$$

$$(m', m')_{10} [l' (p' - p')^2 - h' (q' (p' - p') - p' (q' - q'))] = 0,000000 (\overline{8}, 2475116),$$

$$(m', m')_{11} [l' (p' - p')^2 - h' (q' (p' - p') - p' (q' - q'))] = 0,000000 (\overline{8}, 2642667),$$

$$(m', m')_{12} [l' (p' - p')^2 - h' (q' (p' - p') - p' (q' - q'))] = -0,000000 (\overline{10}, 0704431),$$

$$(m', m')_{13} [l' ((q' - q')^2 - (p' - p')^2) + 2h' (p' - p') (q' - q')] = -0,000000 (\overline{8}, 3398743),$$

$$(m', m')_{14} [l' ((q' - q')^2 - (p' - p')^2) + 2h' (p' - p') (q' - q')] = 0,000000 (\overline{8}, 6592593),$$

$$(m', m')_{15} [l' ((q' - q')^2 + (p' - p')^2) + 2h' (q' p' - q' p')] = 0,000000 (\overline{8}, 8446633),$$

$$(m', m')_{16} [l' ((q' - q')^2 + (p' - p')^2) + 2h' (q' p' - q' p')] = -0,000000 (\overline{8}, 8524693),$$

$$\frac{1}{2} (m', m') l' (l'^2 + h'^2) = 0,000000 (\overline{10}, 8026738),$$

$$\frac{1}{2} (m', m') l' (l'^2 + h'^2) = -0,000000 (\overline{10}, 4854489).$$

Слѣд. сумма членовъ перваго порядка = 0,000000,

« « « третьяго порядка = 0,000000.

Сатурнъ и Земля.

$$\begin{aligned}
(m^r, m'') l^r &= 0,000000, & [m^r, m''] l'' &= -0,000000, \\
(m^r, m'')_1 l^r [l''^2 + h''^2 - (q'' - q^r)^2 - (p'' - p^r)^2] &= 0,000000 (\overline{10}, 3738376), \\
(m^r, m'')_4 l^r [l''^2 + h''^2 - (q'' - q^r)^2 - (p'' - p^r)^2] &= -0,000000 (\overline{9}, 3393667), \\
(m^r, m'')_2 l^r (l'^2 + h'^2) &= -0,000000 (\overline{10}, 8408042), \\
(m^r, m'')_3 l^r (l'^2 + h'^2) &= 0,000000 (\overline{10}, 8799131), \\
(m^r, m'')_5 [2l^r (l' l^r + h'' h^r) + l'' (l'^2 + h'^2)] &= 0,000000 (\overline{8}, 5488112), \\
(m^r, m'')_6 [2l^r (l' l^r + h'' h^r) + l'' (l'^2 + h'^2)] &= -0,000000 (\overline{8}, 5393910), \\
(m^r, m'')_7 l'' (l''^2 + h''^2) &= 0,000000 (\overline{11}, 9836595), \\
(m^r, m'')_8 l'' (l''^2 + h''^2) &= -0,000000 (\overline{10}, 2378365), \\
(m^r, m'')_9 [l^r (l''^2 - h''^2) + 2l'' h'' h^r] &= 0,000000 (\overline{9}, 8435463), \\
\frac{1}{2} (m^r, m'')_4 [l^r (l''^2 - h''^2) + 2l'' h'' h^r] &= -0,000000 (\overline{9}, 6349147), \\
(m^r, m'')_{10} [l'' (p'' - p^r)^2 - h'' (q'' (p'' - p^r) - p^r (q'' - q^r))] &= 0,000000 (\overline{8}, 6105235), \\
(m^r, m'')_{11} [l'' (p'' - p^r)^2 - h'' (q'' (p'' - p^r) - p^r (q'' - q^r))] &= 0,000000 (\overline{8}, 6427357), \\
(m^r, m'')_{12} [l'' (p'' - p^r)^2 - h'' (q'' (p'' - p^r) - p^r (q'' - q^r))] &= -0,000000 (\overline{10}, 6810303), \\
(m^r, m'')_{13} [l^r ((q'' - q^r)^2 - (p'' - p^r)^2) + 2h^r (p'' - p^r) (q'' - q^r)] &= 0,000000 (\overline{8}, 7706691), \\
(m^r, m'')_{14} [l^r ((q'' - q^r)^2 - (p'' - p^r)^2) + 2h^r (p'' - p^r) (q'' - q^r)] &= -0,000000 (\overline{7}, 1413299), \\
(m^r, m'')_{15} [l'' ((q'' - q^r)^2 + (p'' - p^r)^2) + 2h'' (q^r p'' - q'' p^r)] &= 0,000000 (\overline{8}, 4133895), \\
(m^r, m'')_{16} [l'' ((q'' - q^r)^2 + (p'' - p^r)^2) + 2h'' (q^r p'' - q'' p^r)] &= -0,000000 (\overline{8}, 4285056), \\
\frac{1}{2} (m^r, m'') l^r (l'^2 + h'^2) &= 0,000000 (\overline{9}, 1368760), \\
\frac{1}{2} [m^r, m''] l'' (l'^2 + h'^2) &= -0,000000 (\overline{10}, 7704444).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000000,

« « « третьяго порядка = 0,000000.

Сатурнъ и Марсъ.

$$\begin{aligned}
(m^r, m''') l^r &= 0,000000 (\overline{7}, 4443097), & [m^r, m'''] l'' &= 0,000005 (\overline{6}, 7338998), \\
(m^r, m''')_1 l^r [l'''^2 + h'''^2 - (q''' - q^r)^2 - (p''' - p^r)^2] &= -0,000000 (\overline{11}, 8938189), \\
(m^r, m''')_4 l^r [l'''^2 + h'''^2 - (q''' - q^r)^2 - (p''' - p^r)^2] &= 0,000000 (\overline{9}, 5021167), \\
(m^r, m''')_2 l^r (l'^2 + h'^2) &= -0,000000 (\overline{10}, 3530404),
\end{aligned}$$

$$\begin{aligned}
 (m^V, m''')_3 l^V (l'^2 + h'^2) &= 0,000000 (\bar{10},4389274), \\
 (m^V, m''')_5 [2l^V (l'' l^V + h'' h^V) + l''' (l'^2 + h'^2)] &= -0,000000 (\bar{7},4258334), \\
 (m^V, m''')_6 [2l^V (l'' l^V + h'' h^V) + l''' (l'^2 + h'^2)] &= 0,000000 (\bar{7},4024114), \\
 (m^V, m''')_7 l''' (l''^2 + h''^2) &= -0,000000 (\bar{8},6423835), \\
 (m^V, m''')_8 l''' (l''^2 + h''^2) &= 0,000000 (\bar{8},9022169), \\
 (m^V, m''')_9 [l^V (l''^2 - h''^2) + 2l'' h'' h^V] &= 0,000000 (\bar{7},2243520), \\
 \frac{1}{2} (m^V, m''')_4 [l^V (l''^2 - h''^2) + 2l'' h'' h^V] &= -0,000000 (\bar{7},0331079), \\
 (m^V, m''')_{10} [l''' (p''' - p^V)^2 - h''' (q''' (p''' - p^V) - p^V (q''' - q^V))] &= -0,000000 (\bar{8},8908333), \\
 (m^V, m''')_{11} [l''' (p''' - p^V)^2 - h''' (q''' (p''' - p^V) - p^V (q''' - q^V))] &= -0,000000 (\bar{8},9656191), \\
 (m^V, m''')_{12} [l''' (p''' - p^V)^2 - h''' (q''' (p''' - p^V) - p^V (q''' - q^V))] &= 0,000000 (\bar{9},4032371), \\
 (m^V, m''')_{13} [l^V (q''' - q^V)^2 - (p''' - p^V)^2 + 2h^V (p''' - p^V) (q''' - q^V)] &= 0,000000 (\bar{8},2486993), \\
 (m^V, m''')_{14} [l^V (q''' - q^V)^2 - (p''' - p^V)^2 + 2h^V (p''' - p^V) (q''' - q^V)] &= -0,000000 (\bar{8},6228624), \\
 (m^V, m''')_{15} [l''' (q''' - q^V)^2 + (p''' - p^V)^2 + 2h''' (q^V p''' - q''' p^V)] &= -0,000000 (\bar{7},4137499), \\
 (m^V, m''')_{16} [l''' (q''' - q^V)^2 + (p''' - p^V)^2 + 2h''' (q^V p''' - q''' p^V)] &= 0,000000 (\bar{7},4494791), \\
 \frac{1}{2} (m^V, m''') l^V (l'^2 + h'^2) &= 0,000000 (\bar{10},6419761), \\
 \frac{1}{2} [m^V, m'''] l''' (l'^2 + h'^2) &= 0,000000 (\bar{9},9315662).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,000005,

« « « третьяго порядка = 0,000000.

Сатурнъ и Юпитеръ.

$$\begin{aligned}
 (m^V, m^{IV}) l^V &= 0,015372, \quad [m^V, m^{IV}] l^{IV} = 0,562787, \\
 (m^V, m^{IV})_1 l^V [l^{IV2} + h^{IV2} - (q^{IV} - q^V)^2 - (p^{IV} - p^V)^2] &= -0,000025 (\bar{5},4078102), \\
 (m^V, m^{IV})_4 l^V [l^{IV2} + h^{IV2} - (q^{IV} - q^V)^2 - (p^{IV} - p^V)^2] &= 0,000126 (\bar{4},0963449), \\
 (m^V, m^{IV})_2 l^V (l'^2 + h'^2) &= -0,000024 (\bar{5},3759629), \\
 (m^V, m^{IV})_3 l^V (l'^2 + h'^2) &= 0,000085 (\bar{5},9278898), \\
 (m^V, m^{IV})_5 [2l^V (l^{IV} l^V + h^{IV} h^V) + l^{IV} (l'^2 + h'^2)] &= -0,003442 (\bar{3},5368754), \\
 (m^V, m^{IV})_6 [2l^V (l^{IV} l^V + h^{IV} h^V) + l^{IV} (l'^2 + h'^2)] &= -0,010788 (\bar{2},0329432), \\
 (m^V, m^{IV})_7 l^{IV} (l^{IV2} + h^{IV2}) &= -0,002006 (\bar{3},3023052), \\
 (m^V, m^{IV})_8 l^{IV} (l^{IV2} + h^{IV2}) &= 0,004572 (\bar{3},6601438), \\
 (m^V, m^{IV})_9 [l^V (l^{IV2} - h^{IV2}) + 2l^{IV} h^{IV} h^V] &= -0,001585 (\bar{3},2001482),
 \end{aligned}$$

$$\begin{aligned}
& \frac{1}{2} (m^V, m^{IV})_4 [l^V (l^{IV2} - h^{IV2}) + 2l^{IV} h^{IV} h^V] = 0,002055 (\bar{3}, 3129396), \\
& (m^V, m^{IV})_{10} [l^{IV} (p^{IV} - p^V)^2 - h^{IV} (q^{IV} (p^{IV} - p^V) - p^V (q^{IV} - q^V))] = 0,000218 (\bar{4}, 3386597), \\
& (m^V, m^{IV})_{11} [l^{IV} (p^{IV} - p^V)^2 - h^{IV} (q^{IV} (p^{IV} - p^V) - p^V (q^{IV} - q^V))] = 0,001765 (\bar{3}, 2468091), \\
& (m^V, m^{IV})_{12} [l^{IV} (p^{IV} - p^V)^2 - h^{IV} (q^{IV} (p^{IV} - p^V) - p^V (q^{IV} - q^V))] = -0,000374 (\bar{4}, 5726557), \\
& (m^V, m^{IV})_{13} [l^V ((q^{IV} - q^V)^2 - (p^{IV} - p^V)^2) + 2h^V (p^{IV} - p^V) (q^{IV} - q^V)] = 0,000663 (\bar{4}, 8218497), \\
& (m^V, m^{IV})_{14} [l^V ((q^{IV} - q^V)^2 - (p^{IV} - p^V)^2) + 2h^V (p^{IV} - p^V) (q^{IV} - q^V)] = -0,001783 (\bar{3}, 2512362), \\
& (m^V, m^{IV})_{15} [l^{IV} ((q^{IV} - q^V)^2 + (p^{IV} - p^V)^2) + 2h^{IV} (q^V p^{IV} - q^{IV} p^V)] = -0,000217 (\bar{4}, 3374185), \\
& (m^V, m^{IV})_{16} [l^{IV} ((q^{IV} - q^V)^2 + (p^{IV} - p^V)^2) + 2h^{IV} (q^V p^{IV} - q^{IV} p^V)] = 0,000962 (\bar{4}, 9829973), \\
& \frac{1}{2} (m^V, m^{IV}) l^V (l^{V2} + h^{V2}) = 0,000024 (\bar{5}, 3844070), \\
& \frac{1}{2} [m^V, m^{IV}] l^{IV} (l^{V2} + h^{V2}) = 0,000887 (\bar{4}, 9480104).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,547415$,

« « « третьяго порядка = $0,017721$.

Сатурнъ и Уранъ.

$$\begin{aligned}
& (m^V, m^{VI}) l^V = 0,000326, \quad [m^V, m^{VI}] l^{VI} = -0,010575, \\
& (m^V, m^{VI})_1 l^V [l^{VI2} + h^{VI2} - (q^{VI} - q^V)^2 - (p^{VI} - p^V)^2] = -0,000000 (\bar{7}, 3338425), \\
& (m^V, m^{VI})_4 l^V [l^{VI2} + h^{VI2} + (q^{VI} - q^V)^2 - (p^{VI} - p^V)^2] = 0,000001 (\bar{6}, 0771993), \\
& (m^V, m^{VI})_2 l^V (l^{V2} + h^{V2}) = -0,000000 (\bar{7}, 6285451), \\
& (m^V, m^{VI})_3 l^V (l^{V2} + h^{V2}) = 0,000001 (\bar{6}, 1340680), \\
& (m^V, m^{VI})_5 [2l^V (l^V l^{VI} + h^V h^{VI}) + l^{VI} (l^{V2} + h^{V2})] = 0,000069 (\bar{5}, 8388240), \\
& (m^V, m^{VI})_6 [2l^V (l^V l^{VI} + h^V h^{VI}) + l^{VI} (l^{V2} + h^{V2})] = -0,000001 (\bar{6}, 0695190), \\
& (m^V, m^{VI})_7 l^{VI} (l^{VI2} + h^{VI2}) = 0,000031 (\bar{5}, 4986731), \\
& (m^V, m^{VI})_8 l^{VI} (l^{VI2} + h^{VI2}) = -0,000069 (\bar{5}, 8397953), \\
& (m^V, m^{VI})_9 [l^V (l^{VI2} - h^{VI2}) + 2l^{VI} h^{VI} h^V] = -0,000030 (\bar{5}, 4832321), \\
& \frac{1}{2} (m^V, m^{VI})_4 [l^V (l^{VI2} - h^{VI2}) + 2l^{VI} h^{VI} h^V] = 0,000035 (\bar{5}, 5436274), \\
& (m^V, m^{VI})_{10} [l^{VI} (p^{VI} - p^V)^2 - h^{VI} (q^{VI} (p^{VI} - p^V) - p^V (q^{VI} - q^V))] = -0,000007 (\bar{6}, 8802061), \\
& (m^V, m^{VI})_{11} [l^{VI} (p^{VI} - p^V)^2 - h^{VI} (q^{VI} (p^{VI} - p^V) - p^V (q^{VI} - q^V))] = -0,000042 (\bar{5}, 6252492), \\
& (m^V, m^{VI})_{12} [l^{VI} (p^{VI} - p^V)^2 - h^{VI} (q^{VI} (p^{VI} - p^V) - p^V (q^{VI} - q^V))] = 0,000008 (\bar{6}, 8998328), \\
& (m^V, m^{VI})_{13} [l^V ((q^{VI} - q^V)^2 - (p^{VI} - p^V)^2) + 2h^V (p^{VI} - p^V) (q^{VI} - q^V)] = 0,000030 (\bar{5}, 4784510), \\
& (m^V, m^{VI})_{14} [l^V ((q^{VI} - q^V)^2 - (p^{VI} - p^V)^2) + 2h^V (p^{VI} - p^V) (q^{VI} - q^V)] = -0,000079 (\bar{5}, 8991940),
\end{aligned}$$

$$\begin{aligned}(m', m'')_{15} [l''((q'' - q')^2 + (p'' - p')^2) + 2h''(q'p'' - q''p')] &= 0,000020 (\bar{5}, 2946918), \\(m', m'')_{16} [l''((q'' - q')^2 + (p'' - p')^2) + 2h''(q'p'' - q''p')] &= -0,000059 (\bar{5}, 7749473), \\ \frac{1}{2} (m', m'') l'' (l'^2 + h'^2) &= 0,000000 (\bar{7}, 7115042), \\ \frac{1}{2} [m', m''] l'' (l'^2 + h'^2) &= -0,000017 (\bar{5}, 2219792).\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,010901,

« « « третьяго порядка = -0,000059.

Уранъ и Меркурій.

$$\begin{aligned}(m', m) l'' &= -0,000000, \quad [m', m] l = 0,000000, \\(m', m)_1 l'' [l^2 + h^2 - (q - q'')^2 - (p - p'')^2] &= 0,000000 (\bar{12}, 1173446), \\(m', m)_2 l'' [l^2 + h^2 - (q - q'')^2 - (p - p'')^2] &= -0,000000 (\bar{9}, 5077650), \\(m', m)_3 l'' (l'^2 + h'^2) &= 0,000000 (\bar{11}, 5894815), \\(m', m)_4 l'' (l'^2 + h'^2) &= -0,000000 (\bar{11}, 5909605), \\(m', m)_5 [2l''(ll'' + hh'') + l(l'^2 + h'^2)] &= -0,000000 (\bar{9}, 8179696), \\(m', m)_6 [2l''(ll'' + hh'') + l(l'^2 + h'^2)] &= 0,000000 (\bar{9}, 8176487), \\(m', m)_7 l(l^2 + h^2) &= -0,000000 (\bar{9}, 6182411), \quad (m', m)_8 l(l^2 + h^2) = 0,000000 (\bar{10}, 1731895), \\(m', m)_9 [l''(l^2 - h^2) + 2lhh''] &= -0,000000 (\bar{9}, 5640205), \\ \frac{1}{2} (m', m)_4 [l''(l^2 - h^2) + 2lhh''] &= 0,000000 (\bar{9}, 3426623), \\(m', m)_{10} [l(p - p'')^2 - h(q(p - p'') - p''(q - q''))] &= -0,000000 (\bar{8}, 5901104), \\(m', m)_{11} [l(p - p'')^2 - h(q(p - p'') - p''(q - q''))] &= -0,000000 (\bar{8}, 5913041), \\(m', m)_{12} [l(p - p'')^2 - h(q(p - p'') - p''(q - q''))] &= 0,000000 (\bar{11}, 2519477), \\(m', m)_{13} [l''((q - q'')^2 - (p - p'')^2) + 2h''(p - p'')(q - q'')] &= -0,000000 (\bar{11}, 9765054), \\(m', m)_{14} [l''((q - q'')^2 - (p - p'')^2) + 2h''(p - p'')(q - q'')] &= 0,000000 (\bar{10}, 3443346), \\(m', m)_{15} [l((q - q'')^2 + (p - p'')^2) + 2h(q''p - qp'')] &= -0,000000 (\bar{8}, 1753248), \\(m', m)_{16} [l((q - q'')^2 + (p - p'')^2) + 2h(q''p - qp'')] &= 0,000000 (\bar{8}, 1758743), \\ \frac{1}{2} (m', m) l'' (l'^2 + h'^2) &= -0,000000 (\bar{11}, 8903345), \\ \frac{1}{2} [m', m] l (l'^2 + h'^2) &= 0,000000 (\bar{12}, 3754982).\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000000,

« « « третьяго порядка = 0,000000.

Уранъ и Венера.

$$\begin{aligned}
(m^{VI}m')l^{VI} &= -0,000002, & [m^{VI}m']l' &= -0,000000, \\
(m^{VI}m')_1 l^{VI} [l'^2 + h'^2 - (q' - q^{VI})^2 - (p' - p^{VI})^2] &= -0,000000 (\bar{12},9124000), \\
(m^{VI}m')_4 l^{VI} [l'^2 + h'^2 - (q' - q^{VI})^2 - (p' - p^{VI})^2] &= 0,000000 (\bar{9},7603848), \\
(m^{VI}m')_2 l^{VI} (l'^{VI2} + h'^{VI2}) &= 0,000000 (\bar{9},0068541), \\
(m^{VI}m')_3 l^{VI} (l'^{VI2} + h'^{VI2}) &= -0,000000 (\bar{9},0119931), \\
(m^{VI}m')_5 [2l^{VI} (l'l^{VI} + h'h^{VI}) + l' (l'^{VI2} + h'^{VI2})] &= 0,000000 (\bar{8},2411030), \\
(m^{VI}m')_6 [2l^{VI} (l'l^{VI} + h'h^{VI}) + l' (l'^{VI2} + h'^{VI2})] &= -0,000000 (\bar{8},2379287), \\
(m^{VI}m')_7 l' (l'^2 + h'^2) &= 0,000000 (\bar{13},5463495), \\
(m^{VI}m')_8 l' (l'^2 + h'^2) &= -0,000000 (\bar{13},7967753), \\
(m^{VI}m')_9 [l^{VI} (l'^2 - h'^2) + 2l'h'h^{VI}] &= -0,000000 (\bar{13},1255092), \\
\frac{1}{2} (m^{VI}m')_4 [l^{VI} (l'^2 - h'^2) + 2l'h'h^{VI}] &= 0,000000 (\bar{14},9053645), \\
(m^{VI}m')_{10} [l' (p' - p^{VI})^2 - h' (q' (p' - p^{VI}) - p^{VI} (q' - q^{VI}))] &= -0,000000 (\bar{9},9118774), \\
(m^{VI}m')_{11} [l' (p' - p^{VI})^2 - h' (q' (p' - p^{VI}) - p^{VI} (q' - q^{VI}))] &= -0,000000 (\bar{9},9160452), \\
(m^{VI}m')_{12} [l' (p' - p^{VI})^2 - h' (q' (p' - p^{VI}) - p^{VI} (q' - q^{VI}))] &= 0,000000 (\bar{11},1189051), \\
(m^{VI}m')_{13} [l^{VI} ((q' - q^{VI})^2 - (p' - p^{VI})^2) + 2h^{VI} (p' - p^{VI}) (q' - q^{VI})] &= -0,000000 (\bar{9},4598790), \\
(m^{VI}m')_{14} [l^{VI} ((q' - q^{VI})^2 - (p' - p^{VI})^2) + 2h^{VI} (p' - p^{VI}) (q' - q^{VI})] &= 0,000000 (\bar{9},8281957), \\
(m^{VI}m')_{15} [l' ((q' - q^{VI})^2 + (p' - p^{VI})^2) + 2h' (q^{VI}p' - q'p^{VI})] &= 0,000000 (\bar{9},6754688), \\
(m^{VI}m')_{16} [l' ((q' - q^{VI})^2 + (p' - p^{VI})^2) + 2h' (q^{VI}p' - q'p^{VI})] &= -0,000000 (\bar{9},6773729), \\
\frac{1}{2} (m^{VI}m') l^{VI} (l'^{VI2} + h'^{VI2}) &= -0,000000 (\bar{9},3072636), \\
\frac{1}{2} [m^{VI}m'] l' (l'^{VI2} + h'^{VI2}) &= -0,000000 (\bar{12},9641151).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,000002,

« « « третьяго порядка = 0,000000.

Уранъ и Земля.

$$\begin{aligned}
(m^{VII}m'')l^{VII} &= -0,000004, & [m^{VII}m'']l'' &= -0,000000, \\
(m^{VII}m'')_1 l^{VII} [l''^2 + h''^2 - (q'' - q^{VII})^2 - (p'' - p^{VII})^2] &= 0,000000 (\bar{12},2122991), \\
(m^{VII}m'')_4 l^{VII} [l''^2 + h''^2 - (q'' - q^{VII})^2 - (p'' - p^{VII})^2] &= -0,000000 (\bar{10},7797409), \\
(m^{VII}m'')_2 l^{VII} (l''^{VII2} + h''^{VII2}) &= 0,000000 (\bar{9},3383673),
\end{aligned}$$

$$\begin{aligned}
 (m, m'')_3 l'^I (l'^{I2} + h'^{I2}) &= -0,000000 (\bar{9},3481582), \\
 (m, m'')_5 [2l'^I (l'' l'^I + h'' h'^I) + l'' (l'^{I2} + h'^{I2})] &= 0,000000 (\bar{8},4409246), \\
 (m, m'')_6 [2l'^I (l'' l'^I + h'' h'^I) + l'' (l'^{I2} + h'^{I2})] &= -0,000000 (\bar{8},4386884), \\
 (m, m'')_7 l'' (l''^2 + h''^2) &= 0,000000 (\bar{12},6073702), \\
 (m, m'')_8 l'' (l''^2 + h''^2) &= -0,000000 (\bar{12},8583113), \\
 (m, m'')_9 [l'^I (l''^2 - h''^2) + 2l'' h'' h'^I] &= -0,000000 (\bar{9},0906525), \\
 \frac{1}{2} (m, m'')_4 [l'^I (l''^2 - h''^2) + 2l'' h'' h'^I] &= 0,000000 (\bar{10},8720754), \\
 (m, m'')_{10} [l'' (p'' - p'^I)^2 - h'' (q'' (p'' - p'^I) - p'^I (q'' - q'^I))] &= -0,000000 (\bar{9},1660749), \\
 (m, m'')_{11} [l'' (p'' - p'^I)^2 - h'' (q'' (p'' - p'^I) - p'^I (q'' - q'^I))] &= -0,000000 (\bar{9},1740405), \\
 (m, m'')_{12} [l'' (p'' - p'^I)^2 - h'' (q'' (p'' - p'^I) - p'^I (q'' - q'^I))] &= 0,000000 (\bar{12},6571636), \\
 (m, m'')_{13} [l'^I ((q'' - q'^I)^2 - (p'' - p'^I)^2) + 2h'^I (p'' - p'^I) (q'' - q'^I)] &= -0,000000 (\bar{10},7199573), \\
 (m, m'')_{14} [l'^I ((q'' - q'^I)^2 - (p'' - p'^I)^2) + 2h'^I (p'' - p'^I) (q'' - q'^I)] &= 0,000000 (\bar{9},0886005), \\
 (m, m'')_{15} [l'' ((q'' - q'^I)^2 + (p'' - p'^I)^2) + 2h'' (q'^I p'' - q'' p'^I)] &= 0,000000 (\bar{10},6312089), \\
 (m, m'')_{16} [l'' ((q'' - q'^I)^2 + (p'' - p'^I)^2) + 2h'' (q'^I p'' - q'' p'^I)] &= -0,000000 (\bar{10},6349080), \\
 \frac{1}{2} (m, m'') l'^I (l'^{I2} + h'^{I2}) &= -0,000000 (\bar{9},6382091), \\
 \frac{1}{2} [m, m''] l'' (l'^{I2} + h'^{I2}) &= -0,000000 (\bar{11},2371497).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,000004,

« « « третьяго порядка = 0,000000.

Уранъ и Марсъ.

$$\begin{aligned}
 (m, m''') l'^I &= -0,000001, \quad [m, m'''] l''' = 0,000000, \\
 (m, m''')_4 l'^I [l''^2 + h''^2 - (q''' - q'^I)^2 - (p''' - p'^I)^2] &= 0,000000 (\bar{11},9964877), \\
 (m, m''')_4 l'^I [l''^2 + h''^2 - (q''' - q'^I)^2 - (p''' - p'^I)^2] &= -0,000000 (\bar{8},2002737), \\
 (m, m''')_2 l'^I (l'^{I2} + h'^{I2}) &= 0,000000 (\bar{10},8359620), \\
 (m, m''')_3 l'^I (l'^{I2} + h'^{I2}) &= -0,000000 (\bar{10},8584546), \\
 (m, m''')_5 [2l'^I (l'' l'^I + h'' h'^I) + l'' (l'^{I2} + h'^{I2})] &= -0,000003 (\bar{8},9889322), \\
 (m, m''')_6 [2l'^I (l'' l'^I + h'' h'^I) + l'' (l'^{I2} + h'^{I2})] &= 0,000002 (\bar{8},9836305), \\
 (m, m''')_7 l'' (l''^2 + h''^2) &= -0,000000 (\bar{9},2506119), \\
 (m, m''')_8 l'' (l''^2 + h''^2) &= 0,000001 (\bar{9},5029602), \\
 (m, m''')_9 [l'^I (l''^2 - h''^2) + 2l'' h'' h'^I] &= 0,000000 (\bar{8},0120950),
 \end{aligned}$$

$$\begin{aligned}
& \frac{1}{2} (m^{VI} m''')_4 [l^{VI} (l''^2 - h''^2) + 2l'' h'' h^{VI}] = -0,000000 (\bar{9}, 7978409), \\
& (m^{VI} m''')_{10} [l''' (p''' - p^{VI})^2 - h''' (q''' (p''' - p^{VI}) - p^{VI} (q''' - q^{VI}))] = 0,000000 (\bar{9}, 4260107), \\
& (m^{VI} m''')_{11} [l''' (p''' - p^{VI})^2 - h''' (q''' (p''' - p^{VI}) - p^{VI} (q''' - q^{VI}))] = 0,000000 (\bar{9}, 4445137), \\
& (m^{VI} m''')_{12} [l''' (p''' - p^{VI})^2 - h''' (q''' (p''' - p^{VI}) - p^{VI} (q''' - q^{VI}))] = -0,000000 (\bar{11}, 2905297), \\
& (m^{VI} m''')_{13} [l^{VI} (q''' - q^{VI})^2 - (p''' - p^{VI})^2 + 2h^{VI} (p''' - p^{VI}) (q''' - q^{VI})] = 0,000000 (\bar{11}, 9891493), \\
& (m^{VI} m''')_{14} [l^{VI} ((q''' - q^{VI})^2 - (p''' - p^{VI})^2) + 2h^{VI} (p''' - p^{VI}) (q''' - q^{VI})] = -0,000000 (\bar{10}, 1586708), \\
& (m^{VI} m''')_{15} [l''' ((q''' - q^{VI})^2 + (p''' - p^{VI})^2) + 2h''' (q^{VI} p''' - q''' p^{VI})] = -0,000000 (\bar{9}, 9553126), \\
& (m^{VI} m''')_{16} [l''' ((q''' - q^{VI})^2 + (p''' - p^{VI})^2) + 2h''' (q^{VI} p''' - q''' p^{VI})] = 0,000000 (\bar{9}, 9639412), \\
& \frac{1}{2} (m^{VI} m''') l^{VI} (l^{VI2} + h^{VI2}) = -0,000000 (\bar{9}, 1341912), \\
& \frac{1}{2} [m^{VI} m'''] l''' [l^{VI2} + h^{VI2}] = 0,000000 (\bar{10}, 3895916).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,000001 ($\bar{6}$, 0982614),

« « « третьяго порядка = 0,000000.

Уранъ и Юпитеръ.

$$\begin{aligned}
& (m^{VI} m^{IV}) l^{VI} = -0,042595, \quad [m^{VI} m^{IV}] l^{IV} = 0,014855, \\
& (m^{VI} m^{IV})_1 l^{VI} [l^{IV2} + h^{IV2} - (q^{IV} - q^{VI})^2 - (p^{IV} - p^{VI})^2] = 0,000012 (\bar{5}, 0750510), \\
& (m^{VI} m^{IV})_4 l^{VI} [l^{IV2} + h^{IV2} - (q^{IV} - q^{VI})^2 - (p^{IV} - p^{VI})^2] = -0,000178 (\bar{4}, 2512259), \\
& (m^{VI} m^{IV})_2 l^{VI} (l^{IV2} + h^{IV2}) = 0,000027 (\bar{5}, 4334407), \\
& (m^{VI} m^{IV})_3 l^{VI} (l^{IV2} + h^{IV2}) = -0,000045 (\bar{5}, 6514740), \\
& (m^{VI} m^{IV})_5 [2l^{VI} (l^{IV} l^{VI} + h^{IV} h^{VI}) + l^{IV} (l^{VI2} + h^{VI2})] = -0,000515 (\bar{4}, 7116464), \\
& (m^{VI} m^{IV})_6 [2l^{VI} (l^{IV} l^{VI} + h^{IV} h^{VI}) + l^{IV} (l^{VI2} + h^{VI2})] = 0,000211 (\bar{4}, 3250874), \\
& (m^{VI} m^{IV})_7 l^{IV} (l^{IV2} + h^{IV2}) = -0,000034 (\bar{5}, 5375250), \\
& (m^{VI} m^{IV})_8 l^{IV} (l^{IV2} + h^{IV2}) = 0,000065 (\bar{5}, 8158202), \\
& (m^{VI} m^{IV})_9 [l^{VI} (l^{IV2} - h^{IV2}) + 2l^{IV} h^{IV} h^{VI}] = 0,000109 (\bar{4}, 0385282), \\
& \frac{1}{2} (m^{VI} m^{IV})_4 [l^{VI} (l^{IV2} - h^{IV2}) + 2l^{IV} h^{IV} h^{VI}] = -0,000080 (\bar{5}, 9040966), \\
& (m^{VI} m^{IV})_{10} [l^{IV} (p^{IV} - p^{VI})^2 - h^{IV} (q^{IV} (p^{IV} - p^{VI}) - p^{VI} (q^{IV} - q^{VI}))] = 0,000008 (\bar{6}, 8950408), \\
& (m^{VI} m^{IV})_{11} [l^{IV} (p^{IV} - p^{VI})^2 - h^{IV} (q^{IV} (p^{IV} - p^{VI}) - p^{VI} (q^{IV} - q^{VI}))] = 0,000013 (\bar{5}, 1110242), \\
& (m^{VI} m^{IV})_{12} [l^{IV} (p^{IV} - p^{VI})^2 - h^{IV} (q^{IV} (p^{IV} - p^{VI}) - p^{VI} (q^{IV} - q^{VI}))] = -0,000000 (\bar{7}, 9723583), \\
& (m^{VI} m^{IV})_{13} [l^{VI} ((q^{IV} - q^{VI})^2 - (p^{IV} - p^{VI})^2) + 2h^{VI} (p^{IV} - p^{VI}) (q^{IV} - q^{VI})] = -0,000000 (\bar{7}, 5748273), \\
& (m^{VI} m^{IV})_{14} [l^{VI} ((q^{IV} - q^{VI})^2 - (p^{IV} - p^{VI})^2) + 2h^{VI} (p^{IV} - p^{VI}) (q^{IV} - q^{VI})] = 0,000000 (\bar{7}, 9601940),
\end{aligned}$$

$$(m^{VI}m^{IV})_{15} [l^{IV}((q^{IV}-q^{VI})^2+(p^{IV}-p^{VI})^2)+2h^{IV}(q^{VI}p^{IV}-q^{IV}p^{VI})] = -0,000016(\bar{5},2175338),$$

$$(m^{VI}m^{IV})_{16} [l^{IV}((q^{IV}-q^{VI})^2+(p^{IV}-p^{VI})^2)+2h^{IV}(q^{VI}p^{IV}-q^{IV}p^{VI})] = 0,000021(\bar{5},3269397),$$

$$\frac{1}{2}(m^{VI}m^{IV}) l^{VI}(l^{VI2}+h^{VI2}) = -0,000046(\bar{5},6652896),$$

$$\frac{1}{2}[m^{VI}m^{IV}] l^{IV}(l^{VI2}+h^{VI2}) = 0,000016(\bar{5},2078076),$$

Слѣд. сумма членовъ перваго порядка = $-0,057450$,

« « « третьяго порядка = $0,000784$.

Уранъ и Сатурнъ.

$$(m^{VI}m^{V}) l^{VI} = -0,063338, \quad [m^{VI}m^{V}] l^{V} = 0,000705,$$

$$(m^{VI}m^{V})_1 l^{VI}[l^{V2}+h^{V2}-(q^{V}-q^{VI})^2-(p^{V}-p^{VI})^2] = 0,000082(\bar{5},9164211),$$

$$(m^{VI}m^{V})_4 l^{VI}[l^{V2}+h^{V2}-(q^{V}-q^{VI})^2-(p^{V}-p^{VI})^2] = -0,000457(\bar{4},6597779),$$

$$(m^{VI}m^{V})_2 l^{VI}(l^{VI2}+h^{VI2}) = 0,000057(\bar{5},7546416),$$

$$(m^{VI}m^{V})_3 l^{VI}(l^{VI2}+h^{VI2}) = -0,000182(\bar{4},2601645),$$

$$(m^{VI}m^{V})_5 [2l^{VI}(l^{VI}l^{V}+h^{VI}h^{V})+l^{V}(l^{VI2}+h^{VI2})] = 0,000080(\bar{5},9053412),$$

$$(m^{VI}m^{V})_6 [2l^{VI}(l^{VI}l^{V}+h^{VI}h^{V})+l^{V}(l^{VI2}+h^{VI2})] = -0,000001(\bar{6},1360362),$$

$$(m^{VI}m^{V})_7 l^{V}(l^{V2}+h^{V2}) = -0,000003(\bar{6},4846322),$$

$$(m^{VI}m^{V})_8 l^{V}(l^{V2}+h^{V2}) = 0,000007(\bar{6},8257544),$$

$$(m^{VI}m^{V})_9 [l^{VI}(l^{V2}-h^{V2})+2l^{V}h^{V}h^{VI}] = -0,000317(\bar{4},5009545),$$

$$\frac{1}{2}(m^{VI}m^{V})_4 [l^{VI}(l^{V2}-h^{V2})+2l^{V}h^{V}h^{VI}] = 0,000364(\bar{4},5613498),$$

$$(m^{VI}m^{V})_{10} [l^{V}(p^{V}-p^{VI})^2-h^{V}(q^{V}(p^{V}-p^{VI})-p^{VI}(q^{V}-q^{VI}))] = 0,000012(\bar{5},0820490),$$

$$(m^{VI}m^{V})_{11} [l^{V}(p^{V}-p^{VI})^2-h^{V}(q^{V}(p^{V}-p^{VI})-p^{VI}(q^{V}-q^{VI}))] = 0,000067(\bar{5},8270921),$$

$$(m^{VI}m^{V})_{12} [l^{V}(p^{V}-p^{VI})^2-h^{V}(q^{V}(p^{V}-p^{VI})-p^{VI}(q^{V}-q^{VI}))] = -0,000013(\bar{5},1016757),$$

$$(m^{VI}m^{V})_{13} [l^{VI}((q^{V}-q^{VI})^2-(p^{V}-p^{VI})^2)+2h^{VI}(p^{V}-p^{VI})(q^{V}-q^{VI})] = -0,000008(\bar{6},8926961),$$

$$(m^{VI}m^{V})_{14} [l^{VI}((q^{V}-q^{VI})^2-(p^{V}-p^{VI})^2)+2h^{VI}(p^{V}-p^{VI})(q^{V}-q^{VI})] = 0,000020(\bar{5},3134391),$$

$$(m^{VI}m^{V})_{15} [l^{V}((q^{V}-q^{VI})^2+(p^{V}-p^{VI})^2)+2h^{V}(q^{VI}p^{V}-q^{V}p^{VI})] = -0,000050(\bar{5},6983479),$$

$$(m^{VI}m^{V})_{16} [l^{V}((q^{V}-q^{VI})^2+(p^{V}-p^{VI})^2)+2h^{V}(q^{VI}p^{V}-q^{V}p^{VI})] = 0,000151(\bar{4},1786034),$$

$$\frac{1}{2}(m^{VI}m^{V}) l^{VI}(l^{VI2}+h^{VI2}) = -0,000069(\bar{5},8376007),$$

$$\frac{1}{2}[m^{VI}m^{V}] l^{V}(l^{VI2}+h^{VI2}) = 0,000000(\bar{7},8844651).$$

Слѣд. сумма членовъ перваго порядка = $-0,064043$,

« « « третьяго порядка = $-0,000464$.

(19). Для величинъ $\frac{dl}{dt}$, $\frac{dl'}{dt'}$ и пр., получаемъ:

Меркурій и Венера.

$$\begin{aligned}
 (m, m') h &= 0,576173, & [m, m'] h' &= 0,010012, \\
 (m, m')_1 h [l'^2 + h'^2 - (q' - q)^2 - (p' - p)^2] &= 0,002822 (\bar{3}, 4505753), \\
 (m, m')_4 h [l'^2 + h'^2 - (q' - q)^2 - (p' - p)^2] &= -0,014126 (\bar{2}, 1500446), \\
 (m, m')_2 h (l^2 + h^2) &= -0,011476 (\bar{2}, 0598067), \\
 (m, m')_3 h (l^2 + h^2) &= 0,080091 (\bar{2}, 9035866), \\
 (m, m')_5 [2h (ll' + hh') + h' (l^2 + h^2)] &= -0,002012 (\bar{3}, 3037785), \\
 (m, m')_6 [2h (ll' + hh') + h' (l^2 + h^2)] &= -0,000478 (\bar{4}, 6793179), \\
 (m, m')_7 h' (l'^2 + h'^2) &= -0,000000 (\bar{7}, 8478808), \\
 (m, m')_8 h' (l'^2 + h'^2) &= 0,000001 (\bar{6}, 2020928), \\
 (m, m')_9 [h (h'^2 - l'^2) + 2h' l' l] &= 0,000002 (\bar{6}, 4031226), \\
 \frac{1}{2} (m, m')_4 [h (l'^2 - h'^2) + 2h' l' l] &= -0,000003 (\bar{6}, 5045217), \\
 (m, m')_{10} [h' (q' - q)^2 - l' (p' (q' - q) - q (p' - p))] &= 0,000039 (\bar{5}, 5919457), \\
 (m, m')_{11} [h' (q' - q)^2 - l' (p' (q' - q) - q (p' - p))] &= 0,000291 (\bar{4}, 4635051), \\
 (m, m')_{12} [h' (q' - q)^2 - l' (p' (q' - q) - q (p' - p))] &= -0,000060 (\bar{5}, 7791435), \\
 (m, m')_{13} [-h ((q' - q)^2 - (p' - p)^2) + 2l (p' - p) (q' - q)] &= 0,002138 (\bar{3}, 3301661), \\
 (m, m')_{14} [-h ((q' - q)^2 - (p' - p)^2) + 2l (p' - p) (q' - q)] &= -0,005724 (\bar{3}, 7577057), \\
 (m, m')_{15} [h' ((q' - q)^2 + (p' - p)^2) - 2l' (qp' - q'p)] &= -0,000124 (\bar{4}, 0949528), \\
 (m, m')_{16} [h' ((q' - q)^2 + (p' - p)^2) - 2l' (qp' - q'p)] &= 0,000501 (\bar{4}, 6998752), \\
 \frac{1}{2} (m, m') h (l^2 + h^2) &= 0,012179 (\bar{2}, 0856269), \\
 \frac{1}{2} [m, m'] h' (l'^2 + h'^2) &= 0,000212 (\bar{4}, 3255948).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,566161,

« « « третьяго порядка = -0,083265.

Меркурій и Земля.

$$\begin{aligned}
 (m, m'') h &= 0,175046, & [m, m''] h'' &= 0,006946, \\
 (m, m'')_1 h [l''^2 + h''^2 - (q'' - q)^2 - (p' - p)^2] &= 0,000806 (\bar{4}, 9061818), \\
 (m, m'')_4 h [l''^2 + h''^2 - (q'' - q)^2 - (p'' - p)^2] &= -0,006541 (\bar{3}, 8156775), \\
 (m, m'')_2 h (l^2 + h^2) &= -0,002348 (\bar{3}, 3708128),
 \end{aligned}$$

$$\begin{aligned}
(m, m'')_3 h (l^2 + h^2) &= 0,005549 (\bar{3}, 7442245), \\
(m, m'')_5 [2h (ll'' + hh'') + h'' (l^2 + h^2)] &= -0,002413 (\bar{3}, 3825901), \\
(m, m'')_6 [2h (ll'' + hh'') + h'' (l^2 + h^2)] &= 0,001297 (\bar{3}, 1131345), \\
(m, m'')_7 h'' (l'^2 + h'^2) &= -0,000002 (\bar{6}, 3469242), \\
(m, m'')_8 h'' (l'^2 + h'^2) &= 0,000004 (\bar{6}, 6536570), \\
(m, m'')_9 [h (h'^2 - l'^2) + 2h'' l' l] &= -0,000059 (\bar{5}, 7726066), \\
\frac{1}{2} (m, m'')_4 [h (h'^2 - l'^2) + 2h'' l' l] &= 0,000053 (\bar{5}, 7259824), \\
(m, m'')_{10} [h'' (q'' - q)^2 - l'' (p'' (q'' - q) - q (p'' - p))] &= 0,000159 (\bar{4}, 2012070), \\
(m, m'')_{11} [h'' (q'' - q)^2 - l'' (p'' (q'' - q) - q (p'' - p))] &= 0,000441 (\bar{4}, 6445567), \\
(m, m'')_{12} [h'' (q'' - q)^2 - l'' (p'' (q'' - q) - q (p'' - p))] &= -0,000058 (\bar{5}, 7622762), \\
(m, m'')_{13} [-h ((q'' - q)^2 - (p'' - p)^2) + 2l (p'' - p) (q'' - q)] &= -0,000822 (\bar{4}, 9151357), \\
(m, m'')_{14} [-h ((q'' - q)^2 - (p'' - p)^2) + 2l (p'' - p) (q'' - q)] &= 0,002075 (\bar{3}, 3170595), \\
(m, m'')_{15} [h'' ((q'' - q)^2 + (p'' - p)^2) - 2l'' (qp'' - q''p)] &= -0,000277 (\bar{4}, 4425165), \\
(m, m'')_{16} [h'' ((q'' - p)^2 + (p'' - p)^2) - 2l'' (qp'' - q''p)] &= 0,000489 (\bar{4}, 6898157), \\
\frac{1}{2} (m, m'') h (l^2 + h^2) &= 0,003700 (\bar{3}, 5682261), \\
\frac{1}{2} [m, m''] h'' (l^2 + h^2) &= 0,000147 (\bar{4}, 1668178).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,168100,

« « « третьяго порядка = -0,004566.

Меркурій и Марсъ.

$$\begin{aligned}
(m, m''') h &= 0,005539, \quad [m, m'''] h''' = -0,000381, \\
(m, m')_1 h [l'''^2 + h'''^2 - (q''' - q)^2 - (p''' - p)^2] &= -0,000000 (\bar{7}, 4257838), \\
(m, m')_4 h [l'''^2 + h'''^2 - (q''' - q)^2 - (p''' - p)^2] &= 0,000005 (\bar{6}, 7115759), \\
(m, m''')_2 h (l^2 + h^2) &= -0,000063 (\bar{5}, 8022695), \\
(m, m''')_3 h (l^2 + h^2) &= 0,000099 (\bar{5}, 9979163), \\
(m, m''')_5 [2h (ll''' + hh''') + h''' (l^2 + h^2)] &= 0,000192 (\bar{4}, 2827037), \\
(m, m''')_6 [2h (ll''' + hh''') + h''' (l^2 + h^2)] &= -0,000162 (\bar{4}, 2110196), \\
(m, m''')_7 h''' (l'''^2 + h'''^2) &= 0,000003 (\bar{6}, 5139752), \\
(m, m''')_8 h''' (l'''^2 + h'''^2) &= -0,000006 (\bar{6}, 7888355), \\
(m, m''')_9 [h (h'''^2 - l'''^2) + 2h''' l' l] &= 0,000050 (\bar{5}, 7015684),
\end{aligned}$$

*

$$\begin{aligned}
\frac{1}{2} (m, m''')_4 [h(h'''^2 - l'''^2) + 2h''l''l] &= -0,000036 (\bar{5}, 5565548), \\
(m, m''')_{10} [h''(q''' - q)^2 - l''(p'''(q''' - q) - q(p''' - p))] &= -0,000032 (\bar{5}, 5123656), \\
(m, m''')_{11} [h''(q''' - q)^2 - l''(p'''(q''' - q) - q(p''' - p))] &= -0,000050 (\bar{5}, 7017701), \\
(m, m''')_{12} [h''(q''' - q)^2 - l''(p'''(q''' - q) - q(p''' - p))] &= 0,000003 (\bar{6}, 5128889), \\
(m, m''')_{13} [-h((q''' - q)^2 - (p''' - p)^2) + 2l(p''' - p)(q''' - q)] &= -0,000011 (\bar{5}, 0395637), \\
(m, m''')_{14} [-h((q''' - q)^2 - (p''' - p)^2) + 2l(p''' - p)(q''' - q)] &= 0,000026 (\bar{5}, 4241054), \\
(m, m''')_{15} [h''((q''' - q)^2 + (p''' - p)^2) - 2l''(qp''' - q'''p)] &= 0,000021 (\bar{5}, 3200955), \\
(m, m''')_{16} [h''((q''' - q)^2 + (p''' - p)^2) - 2l''(qp''' - q'''p)] &= -0,000026 (\bar{5}, 4149827), \\
\frac{1}{2} (m, m''') h(l^2 + h^2) &= 0,000012 (\bar{5}, 0685610), \\
\frac{1}{2} [m, m'''] h''(l^2 + h^2) &= -0,000008 (\bar{6}, 9058456).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,005920$,

« « « третьяго порядка = $-0,000047$.

Меркурій и Юпитеръ.

$$\begin{aligned}
(m, m^{IV}) h &= 0,316687, \quad [m, m^{IV}] h^{IV} = 0,001382, \\
(m, m^{IV})_1 h [l^{IV^2} + h^{IV^2} - (q^{IV} - q)^2 - (p^{IV} - p)^2] &= 0,000026 (\bar{5}, 4184751), \\
(m, m^{IV})_4 h [l^{IV^2} + h^{IV^2} - (q^{IV} - q)^2 - (p^{IV} - p)^2] &= -0,004771 (\bar{3}, 6786045), \\
(m, m^{IV})_2 h(l^2 + h^2) &= -0,003366 (\bar{3}, 5271258), \\
(m, m^{IV})_3 h(l^2 + h^2) &= 0,003523 (\bar{3}, 5469081), \\
(m, m^{IV})_5 [2h(l^{IV} + hh^{IV}) + h^{IV}(l^2 + h^2)] &= -0,023256 (\bar{2}, 3665351), \\
(m, m^{IV})_6 [2h(l^{IV} + hh^{IV}) + h^{IV}(l^2 + h^2)] &= 0,023009 (\bar{2}, 3619094), \\
(m, m^{IV})_7 h^{IV}(l^{IV^2} + h^{IV^2}) &= -0,000003 (\bar{6}, 4633509), \\
(m, m^{IV})_8 h^{IV}(l^{IV^2} + h^{IV^2}) &= 0,000005 (\bar{6}, 7153969), \\
(m, m^{IV})_9 [h(h^{IV^2} - l^{IV^2}) + 2h^{IV}l^{IV}l] &= 0,000755 (\bar{4}, 8778535), \\
\frac{1}{2} (m, m^{IV})_4 [h(h^{IV^2} - l^{IV^2}) + 2h^{IV}l^{IV}l] &= -0,000460 (\bar{4}, 6626694), \\
(m, m^{IV})_{10} [h^{IV}(q^{IV} - q)^2 - l^{IV}(p^{IV}(q^{IV} - q) - q(p^{IV} - p))] &= -0,001364 (\bar{3}, 1350348), \\
(m, m^{IV})_{11} [h^{IV}(q^{IV} - q)^2 - l^{IV}(p^{IV}(q^{IV} - q) - q(p^{IV} - p))] &= -0,001416 (\bar{3}, 1512607), \\
(m, m^{IV})_{12} [h^{IV}(q^{IV} - q)^2 - l^{IV}(p^{IV}(q^{IV} - q) - q(p^{IV} - p))] &= 0,000009 (\bar{6}, 9410954), \\
(m, m^{IV})_{13} [-h((q^{IV} - q)^2 - (p^{IV} - p)^2) + 2l(p^{IV} - p)(q^{IV} - q)] &= 0,000075 (\bar{5}, 8735224), \\
(m, m^{IV})_{14} [-h((q^{IV} - q)^2 - (p^{IV} - p)^2) + 2l(p^{IV} - p)(q^{IV} - q)] &= -0,000175 (\bar{4}, 2428539),
\end{aligned}$$

$$\begin{aligned}
(m, m^{IV})_{15} [h^{IV}((q^{IV} - q)^2 + (p^{IV} - p)^2) - 2l^{IV}(qp^{IV} - q^{IV}p)] &= 0,010551 (\bar{2}, 0233255), \\
(m, m^{IV})_{16} [h^{IV}((q^{IV} - q)^2 + (p^{IV} - p)^2) - 2l^{IV}(qp^{IV} - q^{IV}p)] &= -0,010737 (\bar{2}, 0308892), \\
\frac{1}{2} (m, m^{IV}) h (l^2 + h^2) &= 0,006694 (\bar{3}, 8257047), \\
\frac{1}{2} [m, m^{IV}] h^{IV} (l^2 + h^2) &= 0,000029 (\bar{5}, 4655849).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,315305$,

« « « третьяго порядка = $-0,000256$.

Меркурій и Сатурнъ.

$$\begin{aligned}
(m, m^V) h &= 0,015251, \quad [m, m^V] h^V = 0,000219, \\
(m, m^V)_1 h [l^{V2} + h^{V2} - (q^V - q)^2 - (p^V - p)^2] &= 0,000000 (\bar{7}, 5539714), \\
(m, m^V)_4 h [l^{V2} + h^{V2} - (q^V - q)^2 - (p^V - p)^2] &= -0,000037 (\bar{5}, 5644143), \\
(m, m^V)_2 h (l^2 + h^2) &= -0,000161 (\bar{4}, 2080731), \\
(m, m^V)_3 h (l^2 + h^2) &= 0,000164 (\bar{4}, 2140310), \\
(m, m^V)_5 [2h (ll^V + hh^V) + h^V (l^2 + h^2)] &= -0,006450 (\bar{3}, 8095965), \\
(m, m^V)_6 [2h (ll^V + hh^V) + h^V (l^2 + h^2)] &= 0,006430 (\bar{3}, 8082450), \\
(m, m^V)_7 h^V (l^{V2} + h^{V2}) &= -0,000000 (\bar{7}, 8408584), \\
(m, m^V)_8 h^V (l^{V2} + h^{V2}) &= 0,000001 (\bar{6}, 0455680), \\
(m, m^V)_9 [h (h^{V2} - l^{V2}) + 2h^V l^V l] &= -0,000061 (\bar{5}, 7827989), \\
\frac{1}{2} (m, m^V)_4 [h (h^{V2} - l^{V2}) + 2h^V l^V l] &= 0,000006 (\bar{6}, 7890456), \\
(m, m^V)_{10} [h^V (q^V - q)^2 - l^V (p^V (q^V - q) - q (p^V - p))] &= 0,000732 (\bar{4}, 8644790), \\
(m, m^V)_{11} [h^V (q^V - q)^2 - l^V (p^V (q^V - q) - q^V (p^V - p))] &= 0,000740 (\bar{4}, 8693063), \\
(m, m^V)_{12} [h^V (q^V - q)^2 - l^V (p^V (q^V - q) - q^V (p^V - p))] &= -0,000001 (\bar{6}, 1357714), \\
(m, m^V)_{13} [-h ((q^V - q)^2 - (p^V - p)^2) + 2l (p^V - p) (q^V - q)] &= 0,000061 (\bar{5}, 7847134), \\
(m, m^V)_{14} [-h ((q^V - q)^2 - (p^V - p)^2) + 2l (p^V - p) (q^V - q)] &= -0,000142 (\bar{4}, 1530941), \\
(m, m^V)_{15} [h^V ((q^V - q)^2 + (p^V - p)^2) - 2l^V (qp^V - q^V p)] &= -0,000665 (\bar{4}, 8229995), \\
(m, m^V)_{16} [h^V ((q^V - q)^2 + (p^V - p)^2) - 2l^V (qp^V - q^V p)] &= 0,000669 (\bar{4}, 8252391), \\
\frac{1}{2} (m, m^V) h (l^2 + h^2) &= 0,000322 (\bar{4}, 5083839), \\
\frac{1}{2} [m, m^V] h^V (l^2 + h^2) &= 0,000005 (\bar{6}, 6662974).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,015032$,

« « « третьяго порядка = $0,000133$.

Меркурій и Уранъ.

$$\begin{aligned}
(m, m^{VI}) h &= 0,000367, & [m, m^{VI}] h^{VI} &= 0,000000, \\
(m, m^{VI})_1 h [l^{VI2} + h^{VI2} - (q^{VI} - q)^2 - (p^{VI} - p)^2] &= 0,000000 (\bar{9}, 3564551), \\
(m, m^{VI})_4 h [l^{VI2} + h^{VI2} - (q^{VI} - q)^2 - (p^{VI} - p)^2] &= -0,000005 (\bar{6}, 7468755), \\
(m, m^{VI})_2 h (l^2 + h^2) &= -0,000004 (\bar{6}, 5883052), \\
(m, m^{VI})_3 h (l^2 + h^2) &= 0,000004 (\bar{6}, 5900212), \\
(m, m^{VI})_5 [2h (ll^{VI} + hh^{VI}) + h^{VI} (l^2 + h^2)] &= -0,000009 (\bar{6}, 9968303), \\
(m, m^{VI})_6 [2h (ll^{VI} + hh^{VI}) + h^{VI} (l^2 + h^2)] &= 0,000009 (\bar{6}, 9965088), \\
(m, m^{VI})_7 h^{VI} (l^{VI2} + h^{VI2}) &= -0,000000 (\bar{8}, 6596256), \\
(m, m^{VI})_8 h^{VI} (l^{VI2} + h^{VI2}) &= 0,000000 (\bar{9}, 2145740), \\
(m, m^{VI})_9 [h (h^{VI2} - l^{VI2}) + 2h^{VI} l^{VI} l] &= 0,000001 (\bar{6}, 0089595), \\
\frac{1}{2} (m, m^{VI})_4 [h (h^{VI2} - l^{VI2}) + 2h^{VI} l^{VI} l] &= -0,000000 (\bar{7}, 7876013), \\
(m, m^{VI})_{10} [h^{VI} (q^{VI} - q)^2 - l^{VI} (p^{VI} (q^{VI} - q) - q (p^{VI} - p))] &= 0,000019 (\bar{5}, 2801599), \\
(m, m^{VI})_{11} [h (q^{VI} - q)^2 - l^{VI} (p^{VI} (q^{VI} - q) - q (p^{VI} - p))] &= 0,000019 (\bar{5}, 2813536), \\
(m, m^{VI})_{12} [h^{VI} (q^{VI} - q)^2 - l^{VI} (p^{VI} (q^{VI} - q) - q (p^{VI} - p))] &= -0,000000 (\bar{9}, 9419972), \\
(m, m^{VI})_{13} [-h ((q^{VI} - q)^2 - (p^{VI} - p)^2) + 2l (p^{VI} - p) (q^{VI} - q)] &= -0,000000 (\bar{7}, 8354200), \\
(m, m^{VI})_{14} [-h ((q^{VI} - q)^2 - (p^{VI} - p)^2) + 2l (p^{VI} - p) (q^{VI} - q)] &= 0,000001 (\bar{6}, 2032492), \\
(m, m^{VI})_{15} [h^{VI} ((q^{VI} - q)^2 + (p^{VI} - p)^2) - 2l^{VI} (qp^{VI} - q^{VI} p)] &= -0,000009 (\bar{6}, 9468667), \\
(m, m^{VI})_{16} [h^{VI} ((q^{VI} - q)^2 + (p^{VI} - p)^2) - 2l^{VI} (qp^{VI} - q^{VI} p)] &= 0,000009 (\bar{6}, 9474162), \\
\frac{1}{2} (m, m^{VI}) h (l^2 + h^2) &= 0,000008 (\bar{6}, 8893951), \\
\frac{1}{2} [m, m^{VI}] h^{VI} (l^2 + h^2) &= 0,000000 (\bar{9}, 9951709).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,000367$,

« « « третьяго порядка = $0,000003$.

Венера и Меркурій.

$$\begin{aligned}
(m', m) h' &= 0,001526, & [m', m] h &= 0,036279, \\
(m', m)_1 h' [l^2 + h^2 - (q - q')^2 - (p - p')^2] &= -0,000047 (\bar{5}, 6713104), \\
(m', m)_4 h' [l^2 + h^2 - (q - q')^2 - (p - p')^2] &= 0,000235 (\bar{4}, 3707797), \\
(m', m)_2 h' (l'^2 + h'^2) &= -0,000000 (\bar{8}, 5290250),
\end{aligned}$$

$$\begin{aligned}
 (m', m)_3 h' (l'^2 + h'^2) &= 0''000000 (\bar{7}, 3728048), \\
 (m', m)_5 [2h' (ll' + hh') + h (l'^2 + h'^2)] &= -0''000006 (\bar{6}, 8110643), \\
 (m', m)_6 [2h' (ll' + hh') + h (l'^2 + h'^2)] &= 0''000001 (\bar{6}, 1865537), \\
 (m', m)_7 h (l'^2 + h'^2) &= -0''002296 (\bar{3}, 3610256), \\
 (m', m)_8 h (l'^2 + h'^2) &= 0''005190 (\bar{3}, 7152376), \\
 (m', m)_9 [h' (h^2 - l^2) + 2hll'] &= -0''000047 (\bar{5}, 6738921), \\
 \frac{1}{2} (m', m)_4 [h' (h^2 - l^2) + 2hll'] &= 0''000060 (\bar{5}, 7752912), \\
 (m', m)_{10} [h (q - q')^2 - l (p (q - q') - q' (p - p'))] &= 0''000122 (\bar{4}, 0879707), \\
 (m', m)_{11} [h (q - q')^2 - l (p (q - q') - q' (p - p'))] &= 0''000911 (\bar{4}, 9595301), \\
 (m', m)_{12} [h (q - q')^2 - l (p (q - q') - q' (p - p'))] &= -0''000118 (\bar{4}, 2751685), \\
 (m', m)_{13} [-h' ((q - q')^2 - (p - p')^2) + 2l' (p - p') (q - q')] &= 0''000015 (\bar{5}, 1907542), \\
 (m', m)_{14} [-h' ((q - q')^2 - (p - p')^2) + 2l' (p - p') (q - q')] &= -0''000041 (\bar{5}, 6182938), \\
 (m', m)_{15} [h ((q - q')^2 + (p - p')^2) - 2l (q'p - qp')] &= -0''000307 (\bar{4}, 4871829), \\
 (m', m)_{16} [h ((q - q')^2 + (p - p')^2) - 2l (q'p - qp')] &= 0''001236 (\bar{3}, 0921053), \\
 \frac{1}{2} (m', m) h' (l'^2 + h'^2) &= 0''000000 (\bar{8}, 5548451), \\
 \frac{1}{2} [m', m] h (l'^2 + h'^2) &= 0''000000 (\bar{7}, 9307270).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0''034753,

« « « третьяго порядка = -0''005322.

Венера и Земля.

$$\begin{aligned}
 (m', m'') h' &= 0''036423, \quad [m', m''] h'' = 0''093816, \\
 (m', m'')_1 h' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] &= 0''000406 (\bar{4}, 6086066), \\
 (m', m'')_4 h' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] &= -0''001444 (\bar{3}, 1597886), \\
 (m', m'')_2 h' (l'^2 + h'^2) &= -0''000002 (\bar{6}, 3880588), \\
 (m', m'')_3 h' (l'^2 + h'^2) &= 0''000011 (\bar{5}, 0304831), \\
 (m', m'')_5 [2h' (l'l'' + h'h'') + h'' (l'^2 + h'^2)] &= -0''000027 (\bar{5}, 4305093), \\
 (m', m'')_6 [2h' (l'l'' + h'h'') + h'' (l'^2 + h'^2)] &= -0''000051 (\bar{5}, 7108683), \\
 (m'', m'')_7 h'' (l'^2 + h'^2) &= -0''000813 (\bar{4}, 9100494), \\
 (m', m'')_8 h'' (l'^2 + h'^2) &= 0''002147 (\bar{3}, 3320045), \\
 (m', m'')_9 [h' (h''^2 - l''^2) + 2h''l'l'] &= -0''000018 (\bar{5}, 2654224),
 \end{aligned}$$

$$\begin{aligned}
\frac{1}{2} (m', m'')_4 [h' (h''^2 - l''^2) + 2h'' l' l'] &= 0,000076 (\bar{5}, 8810594), \\
(m', m'')_{10} [h'' (q'' - q')^2 - l'' (p'' (q'' - q') - q' (p'' - p'))] &= 0,000009 (\bar{6}, 9932837), \\
(m', m'')_{11} [h'' (q'' - q')^2 - l'' (p'' (q'' - q') - q' (p'' - p'))] &= 0,000559 (\bar{4}, 7471910), \\
(m', m'')_{12} [h'' (q'' - q')^2 - l'' (p'' (q'' - q') - q' (p'' - p'))] &= -0,000159 (\bar{4}, 2007623), \\
(m', m'')_{13} [-h' ((q'' - q')^2 - (p'' - p')^2) + 2l' (p'' - p') (q'' - q')] &= -0,000177 (\bar{4}, 2494377), \\
(m', m'')_{14} [-h' ((q'' - q')^2 - (p'' - p')^2) + 2l' (p'' - p') (q'' - q')] &= 0,000532 (\bar{4}, 7263005), \\
(m', m'')_{15} [h'' ((q'' - q')^2 + (p'' - p')^2) - 2l'' (q' p'' - q'' p')] &= -0,000302 (\bar{4}, 4807196), \\
(m', m'')_{16} [h'' ((q'' - q')^2 + (p'' - p')^2) - 2l'' (q' p'' - q'' p')] &= 0,002641 (\bar{3}, 4219068), \\
\frac{1}{2} (m', m'') h' (l'^2 + h'^2) &= 0,000000 (\bar{7}, 9324545), \\
\frac{1}{2} [m', m''] h'' (h'^2 + h'^2) &= 0,000002 (\bar{6}, 3433451).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,057393,

« « « третьяго порядка = -0,001048.

Венера и Марсъ.

$$\begin{aligned}
(m', m''') h' &= 0,000546, \quad [m', m'''] h''' = -0,002537, \\
(m', m''')_4 h' [l'''^2 + h'''^2 - (q''' - q')^2 - (p''' - p')^2] &= -0,000002 (\bar{6}, 3661661), \\
(m', m''')_4 h' [l'''^2 + h'''^2 - (q''' - q')^2 - (p''' - p')^2] &= 0,000014 (\bar{5}, 1384914), \\
(m', m''')_2 h' (l'^2 + h'^2) &= -0,000000 (\bar{9}, 9963299), \\
(m', m''')_3 h' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 4773971), \\
(m', m''')_5 [2h' (l' l''' + h' h''') + h''' (l'^2 + h'^2)] &= 0,000001 (\bar{5}, 0294237), \\
(m', m''')_6 [2h' (l' l''' + h' h''') + h''' (l'^2 + h'^2)] &= -0,000000 (\bar{7}, 2027559), \\
(m', m''')_7 h''' (l'''^2 + h'''^2) &= 0,000029 (\bar{5}, 4607753), \\
(m', m''')_8 h''' (l'''^2 + h'''^2) &= -0,000062 (\bar{5}, 7943780), \\
(m', m''')_9 [h' (h'''^2 - l'''^2) + 2h''' l' l'] &= -0,000000 (\bar{7}, 8070532), \\
\frac{1}{2} (m', m''')_4 [h' (h'''^2 - l'''^2) + 2h''' l' l'] &= 0,000000 (\bar{7}, 8446595), \\
(m', m''')_{10} [h''' (q''' - q')^2 - l''' (p''' (q''' - q') - q' (p''' - p'))] &= -0,000005 (\bar{6}, 6974657), \\
(m', m''')_{11} [h''' (q''' - q')^2 - l''' (p''' (q''' - q') - q' (p''' - p'))] &= -0,000024 (\bar{5}, 3731773), \\
(m', m''')_{12} [h''' (q''' - q')^2 - l''' (p''' (q''' - q') - q' (p''' - p'))] &= 0,000004 (\bar{6}, 6205576), \\
(m', m''')_{13} [-h' ((q''' - q')^2 - (p''' - p')^2) + 2l' (p''' - p') (q''' - q')] &= -0,000000 (\bar{7}, 9511463), \\
(m', m''')_{14} [-h' ((q''' - q')^2 - (p''' - p')^2) + 2l' (p''' - p') (q''' - q')] &= 0,000005 (\bar{6}, 6914503),
\end{aligned}$$

$$(m', m''')_{15} [h''' (q''' - q')^2 + (p''' - p')^2 - 2l''' (q'p''' - q'''p')] = -0,000009 (\bar{6}, 9481116),$$

$$(m', m'')_{16} [h''' (q''' - q')^2 + (p''' - p')^2 - 2l''' (q'p''' - q'''p')] = 0,000023 (\bar{5}, 3681724),$$

$$\frac{1}{2} (m', m''') h' (l'^2 + h'^2) = 0,000000 (\bar{8}, 1084769),$$

$$\frac{1}{2} [m' m'''] h''' [l'^2 + h'^2] = -0,000000 (\bar{8}, 7754103).$$

Слѣд. сумма членовъ перваго порядка = $-0,003083$,

« « « третьяго порядка = $0,000104$.

Венера и Юпитеръ.

$$(m', m^{IV}) h' = 0,022455, \quad [m', m^{IV}] h^{IV} = 0,006758,$$

$$(m', m^{IV})_1 h' [l^{IV2} + h^{IV2} - (q^{IV} - q')^2 - (p^{IV} - p')^2] = -0,000000 (\bar{7}, 7193688),$$

$$(m'', m^{IV})_4 h' [l^{IV2} + h^{IV2} - (q^{IV} - q')^2 - (p^{IV} - p')^2] = 0,000028 (\bar{5}, 4446304),$$

$$(m', m^{IV})_2 h' (l'^2 + h'^2) = -0,000000 (\bar{7}, 4303363),$$

$$(m', m^{IV})_3 h' (l'^2 + h'^2) = 0,000000 (\bar{7}, 4965766),$$

$$(m', m^{IV})_5 [2h' (l'l^{IV} + h'h^{IV}) + h^{IV} (l'^2 + h'^2)] = 0,000018 (\bar{5}, 2601006),$$

$$(m', m^{IV})_6 [2h' (l'l^{IV} + h'h^{IV}) + h^{IV} (l'^2 + h'^2)] = -0,000009 (\bar{6}, 9418403),$$

$$(m', m^{IV})_7 h^{IV} (l^{IV2} + h^{IV2}) = -0,000014 (\bar{5}, 1610139),$$

$$(m', m^{IV})_8 h^{IV} (l^{IV2} + h^{IV2}) = 0,000026 (\bar{5}, 4184423),$$

$$(m', m^{IV})_9 [h' (h^{IV2} - l^{IV2}) + 2h^{IV} l^{IV} l'] = 0,000081 (\bar{5}, 9083341),$$

$$\frac{1}{2} (m', m^{IV})_4 [h' (h^{IV2} - l^{IV2}) + 2h^{IV} l^{IV} l'] = -0,000051 (\bar{5}, 7096956),$$

$$(m', m^{IV})_{10} [h^{IV} (q^{IV} - q')^2 - l^{IV} (p^{IV} (q^{IV} - q') - q' (p^{IV} - p'))] = -0,000034 (\bar{5}, 5281221),$$

$$(m', m^{IV})_{11} [h^{IV} (q^{IV} - q')^2 - l^{IV} (p^{IV} (q^{IV} - q') - q' (p^{IV} - p'))] = -0,000038 (\bar{5}, 5847723),$$

$$(m', m^{IV})_{12} [h^{IV} (q^{IV} - q')^2 - l^{IV} (p^{IV} (q^{IV} - q') - q' (p^{IV} - p'))] = 0,000000 (\bar{7}, 9066419),$$

$$(m', m^{IV})_{13} [-h' ((q^{IV} - q')^2 - (p^{IV} - p')^2) + 2l' (p^{IV} - p') (q^{IV} - q')] = 0,000004 (\bar{6}, 5572482),$$

$$(m', m^{IV})_{14} [-h' ((q^{IV} - q')^2 - (p^{IV} - p')^2) + 2l' (p^{IV} - p') (q^{IV} - q')] = -0,000008 (\bar{6}, 9299262),$$

$$(m', m^{IV})_{15} [h^{IV} ((q^{IV} - q') + (p^{IV} - p')^2) - 2l^{IV} (q'p^{IV} - q^{IV}p')] = 0,000560 (\bar{4}, 7485641),$$

$$(m', m^{IV})_{16} [h^{IV} ((q^{IV} - q')^2 + (p^{IV} - p')^2) - 2l^{IV} (q'p^{IV} - q^{IV}p')] = -0,000596 (\bar{4}, 7754270),$$

$$\frac{1}{2} (m', m^{IV}) h' (l'^2 + h'^2) = -0,000000 (\bar{7}, 7223944),$$

$$\frac{1}{2} [m', m^{IV}] h^{IV} (l'^2 + h'^2) = 0,000000 (\bar{7}, 2009042).$$

Слѣд. сумма членовъ перваго порядка = $-0,015697$,

« « « третьяго порядка = $-0,000187$.

Венера и Сатурнъ.

$$\begin{aligned}
(m', m'') h' &= 0,001061, & [m' m''] h'' &= 0,001054, \\
(m', m'')_1 h' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= -0,000000 (\bar{8}, 6144216), \\
(m', m'')_4 h' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= 0,000007 (\bar{6}, 8581650), \\
(m', m'')_2 h' (l'^2 + h'^2) &= -0,000000 (\bar{8}, 0985664), \\
(m', m'')_3 h' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 1191030), \\
(m', m'')_5 [2h' (l' l'' + h' h'') + h'' (l'^2 + h'^2)] &= -0,000008 (\bar{6}, 8820145), \\
(m', m'')_6 [2h' (l' l'' + h' h'') + h'' (l'^2 + h'^2)] &= 0,000007 (\bar{6}, 8772091), \\
(m', m'')_7 h'' (l'^2 + h'^2) &= -0,000003 (\bar{6}, 4793830), \\
(m', m'')_8 h'' (l'^2 + h'^2) &= 0,000005 (\bar{6}, 7315127), \\
(m', m'')_9 [h' (h'^2 - l'^2) + 2h' l' l''] &= -0,000004 (\bar{6}, 6121719), \\
\frac{1}{2} (m', m'')_4 [h' (h'^2 - l'^2) + 2h' l' l''] &= 0,000002 (\bar{6}, 3972458), \\
(m', m'')_{10} [h'' (q' - q'')^2 - l'' (p' (q' - q'') - q' (p' - p''))] &= 0,000099 (\bar{5}, 9957527), \\
(m', m'')_{11} [h'' (q' - q'')^2 - l'' (p' (q' - q'') - q' (p' - p''))] &= 0,000103 (\bar{4}, 0126078), \\
(m', m'')_{12} [h'' (q' - q'')^2 - l'' (p' (q' - q'') - q' (p' - p''))] &= -0,000000 (\bar{7}, 8187842), \\
(m', m'')_{13} [-h' ((q' - q'')^2 - (p' - p'')^2) + 2l' (p' - p'') (q' - q'')] &= 0,000001 (\bar{6}, 1039313), \\
(m', m'')_{14} [-h' ((q' - q'')^2 - (p' - p'')^2) + 2l' (p' - p'') (q' - q'')] &= -0,000003 (\bar{6}, 4733163), \\
(m', m'')_{15} [h'' ((q' - q'')^2 + (p' - p'')^2) - 2l'' (q' p' - q' p'')] &= -0,000091 (\bar{5}, 9609469), \\
(m', m'')_{16} [h'' ((q' - q'')^2 + (p' - p'')^2) - 2l'' (q' p' - q' p'')] &= 0,000093 (\bar{5}, 9687529), \\
\frac{1}{2} (m', m'') h' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 3970491), \\
\frac{1}{2} [m' m''] h'' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 3940791).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,000007$,

« « « третьяго порядка = $0,000006$.

Венера и Уранъ.

$$\begin{aligned}
(m', m'^I) h' &= 0,000025, & [m' m'^I] h'^I &= 0,000002, \\
(m', m'^I)_1 h' [l'^{I2} + h'^{I2} - (q'^I - q')^2 - (p'^I - p')^2] &= -0,000000 (\bar{12}, 6350233), \\
(m', m'^I)_4 h' [l'^{I2} + h'^{I2} - (q'^I - q')^2 - (p'^I - p')^2] &= 0,000000 (\bar{9}, 4830087), \\
(m', m'^I)_2 h' (l'^2 + h'^2) &= -0,000000 (\bar{10}, 4751328),
\end{aligned}$$

$$\begin{aligned}
 (m', m'^{VI})_3 h' (l'^2 + h'^2) &= 0,000000 (\overline{10}, 4802718), \\
 (m', m'^{VI})_5 [2h' (l'l'^{VI} + h'h'^{VI}) + h'^{VI} (l'^2 + h'^2)] &= -0,000000 (\overline{7}, 2954402), \\
 (m', m'^{VI})_6 [2h' (l'l'^{VI} + h'h'^{VI}) + h'^{VI} (l'^2 + h'^2)] &= 0,000000 (\overline{7}, 2922659), \\
 (m', m'^{VI})_7 h'^{VI} (l'^{VI2} + h'^{VI2}) &= -0,000000 (\overline{9}, 6447029), \\
 (m'', m'^{VI})_8 h'^{VI} (l'^{VI2} + h'^{VI2}) &= 0,000000 (9, 8950287), \\
 (m', m'^{VI})_9 [h' (h'^{VI2} - l'^{VI2}) + 2h'^{VI} l'l'] &= 0,000000 (\overline{8}, 5926374), \\
 \frac{1}{2} (m', m'^{VI})_4 [h' (h'^{VI2} - l'^{VI2}) + 2h'^{VI} l'l'] &= -0,000000 (\overline{8}, 3724927), \\
 (m', m'^{VI})_{10} [h'^{VI} (q'^{VI} - q')^2 - l'^{VI} (p'^{VI} (q'^{VI} - q') - q' (p'^{VI} - p'))] &= 0,000002 (\overline{6}, 3327344), \\
 (m', m'^{VI})_{11} [h'^{VI} (q'^{VI} - q')^2 - l'^{VI} (p'^{VI} (q'^{VI} - q') - q' (p'^{VI} - p'))] &= 0,000002 (\overline{6}, 3369024), \\
 (m', m'^{VI})_{12} [h'^{VI} (q'^{VI} - q')^2 - l'^{VI} (p'^{VI} (q'^{VI} - q') - q' (p'^{VI} - p'))] &= -0,000000 (\overline{9}, 5397621), \\
 (m', m'^{VI})_{13} [-h' ((q'^{VI} - q')^2 - (p'^{VI} - p')^2) + 2l' (p'^{VI} - p') (q'^{VI} - q')] &= -0,000000 (\overline{8}, 2842976), \\
 (m', m'^{VI})_{14} [-h' ((q'^{VI} - q')^2 - (p'^{VI} - p')^2) + 2l' (p'^{VI} - p') (q'^{VI} - q')] &= 0,000000 (\overline{8}, 6526143), \\
 (m', m'^{VI})_{15} [h'^{VI} ((q'^{VI} - q')^2 + (p'^{VI} - p')^2) - 2l'^{VI} (q'p'^{VI} - q'^{VI}p')] &= -0,000001 (\overline{6}, 1692052), \\
 (m', m'^{VI})_{16} [h'^{VI} ((q'^{VI} - q')^2 + (p'^{VI} - p')^2) - 2l'^{VI} (q'p'^{VI} - q'^{VI}p')] &= 0,000001 (\overline{6}, 1711093), \\
 \frac{1}{2} (m', m'^{VI}) h' (l'^2 + h'^2) &= 0,000000 (\overline{10}, 7755423), \\
 \frac{1}{2} [m', m'^{VI}] h'^{VI} (l'^2 + h'^2) &= 0,000000 (\overline{11}, 7327449).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,000023$,

« « третьяго порядка = $0,000000$.

Земля и Меркурій.

$$\begin{aligned}
 (m'', m) h'' &= 0,001001, \quad [m'', m] h = 0,006187, \\
 (m'', m)_1 h'' [l'^2 + h'^2 - (q - q'')^2 - (p - p'')^2] &= -0,000009 (\overline{6}, 9651343), \\
 (m'', m)_4 h'' [l'^2 + h'^2 - (q - q'')^2 - (p - p'')^2] &= 0,000075 (\overline{5}, 8746300), \\
 (m'', m)_2 h'' (l'^2 + h'^2) &= -0,000000 (\overline{8}, 9895630), \\
 (m'', m)_3 h'' (l'^2 + h'^2) &= 0,000000 (\overline{7}, 3629747), \\
 (m'', m)_5 [2h'' (l'l'' + h'h'') + h' (l'^2 + h'^2)] &= -0,000015 (\overline{5}, 1698906), \\
 (m'', m)_6 [2h'' (l'l'' + h'h'') + h' (l'^2 + h'^2)] &= 0,000008 (\overline{6}, 9004350), \\
 (m'', m)_7 h' (l'^2 + h'^2) &= -0,000297 (\overline{4}, 4725736), \\
 (m'', m)_8 h' (l'^2 + h'^2) &= 0,000602 (\overline{4}, 7793064), \\
 (m'', m)_9 [h'' (h'^2 - l'^2) + 2hl''] &= -0,000050 (\overline{5}, 6967014),
 \end{aligned}$$

*

$$\begin{aligned}
\frac{1}{2} (m'', m) [h'' (h^2 - l^2) + 2hll''] &= 0,000045 (\bar{5}, 6500772), \\
(m'', m)_{10} [h (q - q'')^2 - l (p (q - q'') - q'' (p - p''))] &= 0,000086 (\bar{5}, 9329911), \\
(m'', m)_{11} [h (q - q'')^2 - l (p (q - q'') - q'' (p - p''))] &= 0,000238 (\bar{4}, 3763408), \\
(m'', m)_{12} [h (q - q'')^2 - l (p (q - q'') - q'' (p - p''))] &= -0,000031 (\bar{5}, 4940603), \\
(m'', m)_{13} [-h'' ((q - q'')^2 - (p - p'')^2) + 2l'' (p - p'') (q - q'')] &= 0,000002 (\bar{6}, 3412043), \\
(m'', m)_{14} [-h'' ((q - q'')^2 - (p - p'')^2) + 2l'' (p - p'') (q - q'')] &= -0,000005 (\bar{6}, 7431281), \\
(m'', m)_{15} [h ((q - q'')^2 + (p - p'')^2) - 2l (q''p - qp'')] &= -0,000247 (\bar{4}, 3923108), \\
(m'', m)_{16} [h ((q - q'')^2 + (p - p'')^2) - 2l (q''p - qp'')] &= 0,000436 (\bar{4}, 6396100), \\
\frac{1}{2} (m'', m) h'' (l''^2 + h''^2) &= 0,000000 (\bar{7}, 1869762), \\
\frac{1}{2} [m'', m] h (l''^2 + h''^2) &= 0,000000 (\bar{7}, 9406030).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,005096,

« « « третьяго порядка = -0,000362.

Земля и Венера.

$$\begin{aligned}
(m'', m') h'' &= 0,085688, \quad [m'', m'] h' = 0,023063, \\
(m'', m')_1 h'' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= 0,001024 (\bar{3}, 0106488), \\
(m'', m')_4 h'' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= -0,003646 (\bar{3}, 5618308), \\
(m'', m')_2 h'' (l''^2 + h''^2) &= -0,000034 (\bar{5}, 5375881), \\
(m'', m')_3 h'' (l''^2 + h''^2) &= 0,000151 (\bar{4}, 1800154), \\
(m'', m')_5 [2h'' (l'l'' + h'h'') + h' (l''^2 + h''^2)] &= -0,000053 (\bar{5}, 7269374), \\
(m'', m')_6 [2h'' (l'l'' + h'h'') + h' (l''^2 + h''^2)] &= -0,000102 (\bar{4}, 0072964), \\
(m'', m')_7 h' (l'^2 + h'^2) &= -0,000003 (\bar{6}, 5225543), \\
(m'', m')_8 h' (l'^2 + h'^2) &= 0,000009 (\bar{6}, 9445094), \\
(m'', m')_9 [h'' (h'^2 - l'^2) + 2h'l'l''] &= -0,000002 (\bar{6}, 3577383), \\
\frac{1}{2} (m'', m')_4 [h'' (h'^2 - l'^2) + 2h'l'l''] &= 0,000009 (\bar{6}, 9733753), \\
(m'', m')_{10} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] &= 0,000006 (\bar{6}, 7727080), \\
(m'', m')_{11} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] &= 0,000336 (\bar{4}, 5266153), \\
(m'', m')_{12} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] &= -0,000095 (\bar{5}, 9801866), \\
(m'', m')_{13} [-h'' ((q' - q'')^2 - (p' - p'')^2) + 2l'' (p' - p'') (q' - q'')] &= -0,000709 (\bar{4}, 8507166), \\
(m'', m')_{14} [-h'' ((q' - q'')^2 - (p' - p'')^2) + 2l'' (p' - p'') (q' - q'')] &= 0,002126 (\bar{3}, 3275794),
\end{aligned}$$

$$(m'', m')_{15} [h' ((q' - q'')^2 + (p' - p'')^2) - 2l' (q''p' - q'p'')] = -0,000074 (\bar{5}, 8713757),$$

$$(m'', m')_{16} [h' ((q' - q'')^2 + (p' - p'')^2) - 2l' (q''p' - q'p'')] = 0,000649 (\bar{4}, 8125629),$$

$$\frac{1}{2} (m'', m') h'' (l''^2 + h''^2) = 0,000012 (\bar{5}, 0819868),$$

$$\frac{1}{2} [m'', m'] h' (h''^2 + h''^2) = 0,000003 (\bar{6}, 5119984).$$

Слѣд. сумма членовъ перваго порядка = $-0,062625$,

« « « третьяго порядка = $-0,001099$.

Земля и Марсъ.

$$(m'', m''') h'' = 0,004938, \quad [m'', m'''] h''' = -0,009909,$$

$$(m'', m''')_1 h'' [l'''^2 + h'''^2 - (q''' - q'')^2 - (p''' - p'')^2] = -0,000075 (\bar{5}, 8765882),$$

$$(m'', m''')_4 h'' [l'''^2 + h'''^2 - (q''' - q'')^2 - (p''' - p'')^2] = 0,000294 (\bar{4}, 4692293),$$

$$(m'', m''')_2 h'' (l''^2 + h''^2) = -0,000001 (\bar{6}, 0824883),$$

$$(m'', m''')_3 h'' (l''^2 + h''^2) = 0,000005 (\bar{6}, 7059926),$$

$$(m'', m''')_5 [2h'' (l'l''' + h'h''') + h''' (l''^2 + h''^2)] = 0,000020 (\bar{5}, 3059317),$$

$$(m'', m''')_6 [2h'' (l'l''' + h'h''') + h''' (l''^2 + h''^2)] = -0,000026 (\bar{5}, 4143821),$$

$$(m'', m''')_7 h''' (l'''^2 + h'''^2) = 0,000191 (\bar{4}, 2803030),$$

$$(m'', m''')_8 h''' (l'''^2 + h'''^2) = -0,000477 (\bar{4}, 6784100),$$

$$(m'', m''')_9 [h'' (h'''^2 - l'''^2) + 2h''' l'' l'''] = 0,000042 (\bar{5}, 6202180),$$

$$\frac{1}{2} (m'', m''')_4 [h'' (h'''^2 - l'''^2) + 2h''' l'' l'''] = -0,000072 (\bar{5}, 8599163),$$

$$(m'', m''')_{10} [h''' (q''' - q'')^2 - l''' (p''' (q''' - q'') - q'' (p''' - p''))] = -0,000006 (\bar{6}, 8179567),$$

$$(m'', m''')_{11} [h''' (q''' - q'')^2 - l''' (p''' (q''' - q'') - q'' (p''' - p''))] = -0,000157 (\bar{4}, 1969459),$$

$$(m'', m''')_{12} [h''' (q''' - q'')^2 - l''' (p''' (q''' - q'') - q'' (p''' - p''))] = 0,000041 (\bar{5}, 6121023),$$

$$(m'', m''')_{13} [-h'' ((q''' - q'')^2 - (p''' - p'')^2) + 2l'' (p''' - p'') (q''' - q'')] = 0,000000 (\bar{7}, 8345172),$$

$$(m'', m''')_{14} [-h'' ((q''' - q'')^2 - (p''' - p'')^2) + 2l'' (p''' - p'') (q''' - q'')] = -0,000002 (\bar{6}, 2832331),$$

$$(m'', m''')_{15} [h''' ((q''' - q'')^2 + (p''' - p'')^2) - 2l''' (q''p''' - q'''p'')] = 0,000000 (\bar{8}, 6644013),$$

$$(m'', m''')_{16} [h''' ((q''' - q'')^2 + (p''' - p'')^2) - 2l''' (q''p''' - q'''p'')] = -0,000060 (\bar{5}, 7803697),$$

$$\frac{1}{2} (m'', m''') h'' (h''^2 + l''^2) = 0,000000 (\bar{7}, 8426706),$$

$$\frac{1}{2} [m'', m'''] h''' (l''^2 + h''^2) = -0,000001 (\bar{6}, 1451135).$$

Слѣд. сумма членовъ перваго порядка = $-0,014847$,

« « « третьяго порядка = $0,000659$.

Земля и Юпитеръ.

$$\begin{aligned}
(m'', m'') h'' &= 0,116825, & [m'', m''] h'' &= 0,015679, \\
(m'', m'')_1 h'' [l''^2 + h''^2 - (q'' - q'')^2 - (p'' - p'')^2] &= -0,000012 (\bar{5}, 0974777), \\
(m'', m'')_4 h'' [l''^2 + h''^2 - (q'' - q'')^2 - (p'' - p'')^2] &= 0,000356 (\bar{4}, 5517279), \\
(m'', m'')_2 h'' (l''^2 + h''^2) &= -0,000008 (\bar{6}, 9337617), \\
(m'', m'')_3 h'' (l''^2 + h''^2) &= 0,000011 (\bar{5}, 0541751), \\
(m'', m'')_5 [2h'' (l'' l'' + h'' h'') + h'' (l''^2 + h''^2)] &= -0,000063 (\bar{5}, 7976517), \\
(m'', m'')_6 [2h'' (l'' l'' + h'' h'') + h'' (l''^2 + h''^2)] &= 0,000006 (\bar{6}, 7618320), \\
(m'', m'')_7 h'' (l''^2 + h''^2) &= -0,000034 (\bar{5}, 5373045), \\
(m'', m'')_8 h'' (l''^2 + h''^2) &= 0,000063 (\bar{5}, 8015642), \\
(m'', m'')_9 [h'' (h''^2 - l''^2) + 2h'' l'' l''] &= -0,000171 (\bar{4}, 2342407), \\
\frac{1}{2} (m'', m'')_4 [h'' (h''^2 - l''^2) + 2h'' l'' l''] &= -0,000228 (\bar{4}, 3576368), \\
(m'', m'')_{10} [h'' (q'' - q'')^2 - l'' (p'' (q'' - q'') - q'' (p'' - p''))] &= 0,000085 (\bar{5}, 9275121), \\
(m'', m'')_{11} [h'' (q'' - q'')^2 - l'' (p'' (q'' - q'') - q'' (p'' - p''))] &= 0,000108 (\bar{4}, 0358116), \\
(m'', m'')_{12} [h'' (q'' - q'')^2 - l'' (p'' (q'' - q'') - q'' (p'' - p''))] &= -0,000004 (\bar{6}, 6253171), \\
(m'', m'')_{13} [-h'' ((q'' - q'')^2 - (p'' - p'')^2) + 2l'' (p'' - p'') (q'' - q'')] &= -0,000049 (\bar{5}, 6938116), \\
(m'', m'')_{14} [-h'' ((q'' - q'')^2 - (p'' - p'')^2) + 2l'' (p'' - p'') (q'' - q'')] &= 0,000118 (\bar{4}, 0706931), \\
(m'', m'')_{15} [h'' ((q'' - q'')^2 + (p'' - p'')^2) - 2l'' (q'' p'' - q'' p'')] &= -0,000090 (\bar{5}, 9557768), \\
(m'', m'')_{16} [h'' ((q'' - q'')^2 + (p'' - p'')^2) - 2l'' (q'' p'' - q'' p'')] &= 0,000102 (\bar{4}, 0082359), \\
\frac{1}{2} (m'', m'') h'' (l''^2 + h''^2) &= 0,000016 (\bar{5}, 2166013), \\
\frac{1}{2} [m'', m''] h'' (l''^2 + h''^2) &= 0,000002 (\bar{6}, 3443860).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,101146,

« « « третьяго порядка = 0,000032.

Земля и Сатурнъ.

$$\begin{aligned}
(m'', m'') h'' &= 0,005392, & [m'', m''] h'' &= 0,002392, \\
(m'', m'')_1 h'' [l''^2 + h''^2 - (q'' - q'')^2 - (p'' - p'')^2] &= -0,000001 (\bar{6}, 0576823), \\
(m'', m'')_4 h'' [l''^2 + h''^2 - (q'' - q'')^2 - (p'' - p'')^2] &= 0,000010 (\bar{5}, 0232116), \\
(m'', m'')_2 h'' (l''^2 + h''^2) &= -0,000000 (\bar{7}, 5847118),
\end{aligned}$$

$$\begin{aligned}
 (m'', m'')_3 h'' (l'^2 + h'^2) &= 0,000000 (\bar{7}, 6238207), \\
 (m'', m'')_5 [2h'' (l' l' + h'' h') + h' (l'^2 + h'^2)] &= -0,000072 (\bar{5}, 8601943), \\
 (m'', m'')_6 [2h'' (l' l' + h'' h') + h' (l'^2 + h'^2)] &= 0,000072 (\bar{5}, 8507741), \\
 (m'', m'')_7 h' (l'^2 + h'^2) &= -0,000007 (\bar{6}, 8381685), \\
 (m'', m'')_8 h' (l'^2 + h'^2) &= 0,000012 (\bar{5}, 0923455), \\
 (m'', m'')_9 [h'' (h'^2 - l'^2) + 2h' l' l''] &= -0,000021 (\bar{5}, 3278551), \\
 \frac{1}{2} (m'', m'')_4 [h'' (h'^2 - l'^2) + 2h' l' l''] &= 0,000013 (\bar{5}, 1192237), \\
 (m'', m'')_{10} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] &= 0,000031 (\bar{5}, 4945414), \\
 (m'', m'')_{11} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] &= 0,000034 (\bar{5}, 5267536), \\
 (m'', m'')_{12} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] &= -0,000000 (\bar{7}, 5650482), \\
 (m'', m'')_{13} [-h'' ((q' - q'')^2 - (p' - p'')^2) + 2l'' (p' - p'') (q' - q'')] &= -0,000006 (\bar{6}, 8153587), \\
 (m'', m'')_{14} [-h'' ((q' - q'')^2 - (p' - p'')^2) + 2l'' (p' - p'') (q' - q'')] &= 0,000015 (\bar{5}, 1860195), \\
 (m'', m'')_{15} [h' ((q' - q'')^2 + (p' - p'')^2) - 2l' (q' p' - q' p'')] &= -0,000166 (\bar{4}, 2192972), \\
 (m'', m'')_{16} [h' ((q' - q'')^2 + (p' - p'')^2) - 2l' (q' p' - q' p'')] &= 0,000171 (\bar{4}, 2344133), \\
 \frac{1}{2} (m'', m'') h'' (l'^2 + h'^2) &= 0,000000 (\bar{7}, 8807836), \\
 \frac{1}{2} [m'', m''] h' (l'^2 + h'^2) &= 0,000000 (\bar{7}, 5278518).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,003000$,

« « « третьяго порядка = $0,000055$.

Земля и Уранъ.

$$\begin{aligned}
 (m'', m'') h'' &= 0,000128, \quad [m'', m''] h' = 0,000005, \\
 (m'', m'')_1 h'' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= -0,000000 (\bar{9}, 0183979), \\
 (m'', m'')_4 h'' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= 0,000000 (\bar{7}, 5858397), \\
 (m'', m'')_2 h'' (l'^2 + h'^2) &= -0,000000 (\bar{9}, 9561784), \\
 (m'', m'')_3 h'' (l'^2 + h'^2) &= 0,000000 (\bar{9}, 9659693), \\
 (m'', m'')_5 [2h'' (l' l' + h'' h') + h' (l'^2 + h'^2)] &= -0,000000 (\bar{7}, 9686738), \\
 (m'', m'')_6 [2h'' (l' l' + h'' h') + h' (l'^2 + h'^2)] &= 0,000000 (\bar{7}, 9664376), \\
 (m'', m'')_7 h' (l'^2 + h'^2) &= -0,000000 (\bar{9}, 9980975), \\
 (m'', m'')_8 h' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 2490386), \\
 (m'', m'')_9 [h'' (h'^2 - l'^2) + 2h' l' l''] &= 0,000000 (\bar{7}, 4636091),
 \end{aligned}$$

$$\begin{aligned}
\frac{1}{2} (m'', m'')_4 [h'' (h'^2 - l'^2) + 2h'' l' l''] &= -0,000000 (\bar{7}, 2450320), \\
(m'', m'')_{10} [h'' (q'' - q'')^2 - l'' (p'' (q'' - q'') - q'' (p'' - p''))] &= 0,000000 (\bar{7}, 3876085), \\
(m'', m'')_{11} [h'' (q'' - q'')^2 - l'' (p'' (q'' - q'') - q'' (p'' - p''))] &= 0,000000 (\bar{7}, 3965741), \\
(m'', m'')_{12} [h'' (q'' - q'')^2 - l'' (p'' (q'' - q'') - q'' (p'' - p''))] &= -0,000000 (\bar{10}, 8786972), \\
(m'', m'')_{13} [-h'' ((q'' - q'')^2 - (p'' - p'')^2) + 2l'' (p'' - p'') (q'' - q'')] &= -0,000000 (\bar{8}, 1122154), \\
(m'', m'')_{14} [-h'' ((q'' - q'')^2 - (p'' - p'')^2) + 2l'' (p'' - p'') (q'' - q'')] &= 0,000000 (\bar{8}, 4808586), \\
(m'', m'')_{15} [h'' ((q'' - q'')^2 + (p'' - p'')^2) - 2l'' (q'' p'' - q'' p'')] &= -0,000000 (\bar{7}, 1353795), \\
(m'', m'')_{16} [h'' ((q'' - q'')^2 + (p'' - p'')^2) - 2l'' (q'' p'' - q'' p'')] &= 0,000000 (\bar{7}, 1390786), \\
\frac{1}{2} (m'', m'') h'' (l''^2 + h''^2) &= 0,000000 (\bar{8}, 2560202), \\
\frac{1}{2} [m'', m''] h'' (l''^2 + h''^2) &= 0,000000 (\bar{10}, 8544556).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,000123,

« « « третьяго порядка = 0,000000.

Марсъ и Меркурій.

$$\begin{aligned}
(m''', m''') h''' &= -0,000544, \quad [m''', m'''] h = 0,000786, \\
(m''', m''')_1 h''' [l'^2 + h'^2 - (q - q''')^2 - (p - p''')^2] &= 0,000000 (7, 2545934), \\
(m''', m''')_4 h''' [(l'^2 + h'^2) - (q - q''')^2 - (p - p''')^2] &= -0,000003 (\bar{6}, 5403855), \\
(m''', m''')_2 h''' (l'''^2 + h'''^2) &= 0,000001 (\bar{6}, 1077251), \\
(m''', m''')_3 h''' (l'''^2 + h'''^2) &= -0,000002 (\bar{6}, 3033719), \\
(m''', m''')_5 [2h''' (ll''' + hh''') + h (l'''^2 + h'''^2)] &= -0,000052 (\bar{5}, 7195195), \\
(m''', m''')_6 [2h''' (ll''' + hh''') + h (l'''^2 + h'''^2)] &= 0,000044 (\bar{5}, 6478354), \\
(m''', m''')_7 h (l'^2 + h'^2) &= -0,000033 (\bar{5}, 5156776), \\
(m''', m''')_8 h (l'^2 + h'^2) &= 0,000062 (\bar{5}, 7905379), \\
(m''', m''')_9 [h''' (h^2 - l^2) + 2hll'''] &= -0,000004 (\bar{6}, 6228734), \\
\frac{1}{2} (m''', m''')_4 [h''' (h^2 - l^2) + 2hll'''] &= 0,000003 (\bar{6}, 4778598), \\
(m''', m''')_{10} [h (q - q''')^2 - l (p (q - q''') - q''' (p - p'''))] &= 0,000017 (\bar{5}, 2204193), \\
(m''', m''')_{11} [h (q - q''')^2 - l (p (q - q''') - q''' (p - p'''))] &= 0,000026 (\bar{5}, 4098238), \\
(m''', m''')_{12} [h (q - q''')^2 - l (p (q - q''') - q''' (p - p'''))] &= -0,000002 (\bar{6}, 2209426), \\
(m''', m''')_{13} [-h''' ((q - q''')^2 - (p - p''')^2) + 2l''' (p - p''') (q - q''')] &= -0,000007 (\bar{6}, 8519679), \\
(m''', m''')_{14} [-h''' ((q - q''')^2 - (p - p''')^2) + 2l''' (p - p''') (q - q''')] &= 0,000017 (\bar{5}, 2365096),
\end{aligned}$$

$$(m, m')_{15} [h((q - q'')^2 + (p - p'')^2) - 2l(q''p - qp'')] = -0,000041(\bar{5},6111230),$$

$$(m, m')_{16} [h((q - q'')^2 + (p - p'')^2) - 2l(q''p - qp'')] = 0,000051(\bar{5},7060102),$$

$$\frac{1}{2} (m, m') h''' (l''^2 + h''^2) = 0,000002(\bar{6},3740166),$$

$$\frac{1}{2} [m, m'] h (l''^2 + h''^2) = 0,000003(\bar{6},5332792),$$

Слѣд. сумма членовъ перваго порядка = 0,001330,

« « « третьяго порядка = - 0,000054.

Марсъ и Венера.

$$(m, m') h''' = -0,020266, \quad [m, m'] h' = 0,001444,$$

$$(m, m')_1 h''' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] = -0,000012(\bar{5},0953755),$$

$$(m, m')_2 h''' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] = 0,000074(\bar{5},8677008),$$

$$(m, m')_3 h''' (l''^2 + h''^2) = 0,000068(\bar{5},8325679),$$

$$(m, m')_4 h''' (l''^2 + h''^2) = -0,000206(\bar{4},3136351),$$

$$(m, m')_5 [2h''' (l'l'' + h'h'') + h' (l''^2 + h''^2)] = -0,000057(\bar{5},7601865),$$

$$(m, m')_6 [2h''' (l'l'' + h'h'') + h' (l''^2 + h''^2)] = 0,000008(\bar{6},9335187),$$

$$(m, m')_7 h' (l'^2 + h'^2) = -0,000000(\bar{8},9493335),$$

$$(m, m')_8 h' (l'^2 + h'^2) = 0,000000(\bar{7},2829362),$$

$$(m, m')_9 [h''' (h'^2 - l'^2) + 2h'l'l''] = 0,000003(\bar{6},4826680),$$

$$\frac{1}{2} (m, m')_4 [h''' (h'^2 - l'^2) + 2h'l'l''] = -0,000003(\bar{6},5202743),$$

$$(m, m')_{10} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] = -0,000000(\bar{7},7447350),$$

$$(m, m')_{11} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] = -0,000003(\bar{6},4204466),$$

$$(m, m')_{12} [h' (q' - q'')^2 - l' (p' (q' - q'') - q'' (p' - p''))] = 0,000000(\bar{7},6678269),$$

$$(m, m')_{13} [-h''' ((q' - q'')^2 - (p' - p'')^2) + 2l''' (p' - p'') (q' - q'')] = 0,000044(\bar{5},6433699),$$

$$(m, m')_{14} [-h''' ((q' - q'')^2 - (p' - p'')^2) + 2l''' (p' - p'') (q' - q'')] = -0,000242(\bar{4},3836749),$$

$$(m, m')_{15} [h' ((q' - q'')^2 + (p' - p'')^2) - 2l' (q''p' - q'p'')] = -0,000006(\bar{6},7694942),$$

$$(m, m')_{16} [h' ((q' - q'')^2 + (p' - p'')^2) - 2l' (q''p' - q'p'')] = 0,000015(\bar{5},1895550),$$

$$\frac{1}{2} (m, m') (h''^2 + h'''^2) = -0,000088(\bar{5},9447149),$$

$$\frac{1}{2} [m, m'] h' (l''^2 + h''^2) = 0,000005(\bar{6},7977123),$$

Слѣд. сумма членовъ перваго порядка = 0,021710,

« « « третьяго порядка = - 0,000204.

Марсъ и Земля.

$$\begin{aligned}
(m''', m'') h''' &= -0,077881, & [m''', m''] h'' &= 0,022952, \\
(m''', m'')_1 h''' [l''^2 + h''^2 - (q'' - q''')^2 - (p'' - p''')^2] &= -0,000118 (\bar{4}, 0737364), \\
(m''', m'')_4 h''' [l''^2 + h''^2 - (q'' - q''')^2 - (p'' - p''')^2] &= 0,000464 (\bar{4}, 6663775), \\
(m''', m'')_2 h''' (l''^2 + h''^2) &= 0,000588 (\bar{4}, 7691935), \\
(m''', m'')_3 h''' (l''^2 + h''^2) &= -0,002470 (\bar{3}, 3926978), \\
(m''', m'')_5 [2h''' (l' l'' + h'' h''') + h'' (l'''^2 + h'''^2)] &= -0,002700 (\bar{3}, 4314724), \\
(m''', m'')_6 [2h''' (l' l'' + h'' h''') + h'' (l'''^2 + h'''^2)] &= -0,003467 (\bar{3}, 5399228), \\
(m''', m'')_7 h'' (l''^2 + h''^2) &= -0,000143 (\bar{4}, 1563556), \\
(m''', m'')_8 h'' (l''^2 + h''^2) &= 0,000358 (\bar{4}, 5544628), \\
(m''', m'')_9 [h''' (h''^2 - l''^2) + 2h'' l' l'''] &= 0,000077 (\bar{5}, 8883094), \\
\frac{1}{2} (m''', m'')_4 [h''' (h''^2 - l''^2) + 2h'' l' l'''] &= -0,000134 (\bar{4}, 1282032), \\
(m''', m'')_{10} [h'' (q'' - q''')^2 - l'' (p'' (q'' - q''') - q''' (p'' - p'''))] &= 0,000006 (\bar{6}, 7621529), \\
(m''', m'')_{11} [h'' (q'' - q''')^2 - l'' (p'' (q'' - q''') - q''' (p'' - p'''))] &= 0,000138 (\bar{4}, 1411419), \\
(m''', m'')_{12} [h'' (q'' - q''')^2 - l'' (p'' (q'' - q''') - q''' (p'' - p'''))] &= -0,000036 (\bar{5}, 5562083), \\
(m''', m'')_{13} [-h''' (q'' - q''')^2 - (p'' - p''')^2 + 2l''' (p'' - p''') (q'' - q''')] &= -0,000311 (\bar{4}, 4924729), \\
(m''', m'')_{14} [-h''' (q'' - q''')^2 - (p'' - p''')^2 + 2l''' (p'' - p''') (q'' - q''')] &= 0,000873 (\bar{4}, 9411893), \\
(m''', m'')_{15} [h'' (q'' - q''')^2 + (p'' - p''')^2 - 2l'' (q''' p'' - q'' p''')] &= -0,000000 (\bar{7}, 0291748), \\
(m''', m'')_{16} [h'' (q'' - q''')^2 + (p'' - p''')^2 - 2l'' (q''' p'' - q'' p''')] &= 0,000140 (\bar{4}, 1451432), \\
\frac{1}{2} (m''', m'') h''' (l'''^2 + h'''^2) &= -0,000338 (\bar{4}, 5293758), \\
\frac{1}{2} [m''', m''] h'' (h'''^2 + l'''^2) &= 0,000099 (\bar{5}, 9987617).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,100833,

“ “ “ третьяго порядка = -0,003360.

Марсъ и Юпитеръ.

$$\begin{aligned}
(m''', m^{IV}) h''' &= -0,632247, & [m''', m^{IV}] h^{IV} &= 0,049232, \\
(m''', m^{IV})_1 h''' [l^{IV^2} + h^{IV^2} - (q^{IV} - q''')^2 - (p^{IV} - p''')^2] &= 0,000165 (\bar{4}, 2168158), \\
(m''', m^{IV})_4 h''' [l^{IV^2} + h^{IV^2} - (q^{IV} - q''')^2 - (p^{IV} - p''')^2] &= -0,001253 (\bar{3}, 3332289), \\
(m''', m^{IV})_2 h''' (l'''^2 + h'''^2) &= 0,001538 (\bar{3}, 1870974),
\end{aligned}$$

$$\begin{aligned}
 (m''', m'')_3 h''' (l''^2 + h''^2) &= -0,002715 (\bar{3}, 4338996), \\
 (m''', m'')_5 [2h''' (l'' l' + h''' h'') + h'' (l''^2 + h''^2)] &= 0,005745 (\bar{3}, 7592992), \\
 (m''', m'')_6 [2h''' (l'' l' + h''' h'') + h'' (l''^2 + h''^2)] &= -0,004498 (\bar{3}, 6530684), \\
 (m''', m'')_7 h'' (l'^2 + h'^2) &= -0,000116 (\bar{4}, 0660288), \\
 (m''', m'')_8 h'' (l'^2 + h'^2) &= 0,000223 (\bar{4}, 3489530), \\
 (m''', m'')_9 [h''' (h'^2 - l'^2) + 2h'' l' l''] &= -0,003209 (\bar{3}, 5063350), \\
 \frac{1}{2} (m''', m'')_4 [h''' (h'^2 - l'^2) + 2h'' l' l''] &= 0,002433 (\bar{3}, 3861577), \\
 (m''', m'')_{10} [h'' (q'^2 - q''^2) - l'' (p'^2 - p''^2) - q''' (p' - p'')] &= 0,000536 (\bar{4}, 7290191), \\
 (m''', m'')_{11} [h'' (q'^2 - q''^2) - l'' (p'^2 - p''^2) - q''' (p' - p'')] &= 0,000957 (\bar{4}, 9810456), \\
 (m''', m'')_{12} [h'' (q'^2 - q''^2) - l'' (p'^2 - p''^2) - q''' (p' - p'')] &= -0,000079 (\bar{5}, 9002678), \\
 (m''', m'')_{13} [-h''' ((q' - q'')^2 - (p' - p'')^2) + 2l''' (p' - p'') (q' - q'')] &= -0,000627 (\bar{4}, 7972460), \\
 (m''', m'')_{14} [-h''' ((q' - q'')^2 - (p' - p'')^2) + 2l''' (p' - p'') (q' - q'')] &= 0,001012 (\bar{3}, 0053685), \\
 (m''', m'')_{15} [h'' ((q' - q'')^2 - (p' - p'')^2) - 2l'' (q' p' - q'' p'')] &= 0,001279 (\bar{3}, 1071144), \\
 (m''', m'')_{16} [h'' ((q' - q'')^2 - (p' - p'')^2) - 2l'' (q' p' - q'' p'')] &= -0,001724 (\bar{3}, 2367089), \\
 \frac{1}{2} (m''', m'') h''' (l''^2 + h''^2) &= -0,002746 (\bar{3}, 4388625), \\
 \frac{1}{2} [m''', m''] h'' (l'^2 + h'^2) &= 0,000214 (\bar{4}, 3301904).
 \end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,681479,

« « « третьяго порядка = 0,004188.

Марсъ и Сатурнъ.

$$\begin{aligned}
 (m''', m'') h''' &= -0,027205, \quad [m''', m''] h'' = 0,007034, \\
 (m''', m'')_1 h''' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= 0,000001 (\bar{6}, 2008803), \\
 (m''', m'')_4 h''' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= -0,000064 (\bar{5}, 8091777), \\
 (m''', m'')_2 h''' (l''^2 + h''^2) &= 0,000061 (\bar{5}, 7836531), \\
 (m''', m'')_3 h''' (l''^2 + h''^2) &= -0,000074 (\bar{5}, 8695401), \\
 (m''', m'')_5 [2h''' (l'' l' + h''' h'') + h'' (l''^2 + h''^2)] &= -0,001372 (\bar{3}, 1376567), \\
 (m''', m'')_6 [2h''' (l'' l' + h''' h'') + h'' (l''^2 + h''^2)] &= 0,001301 (\bar{3}, 1142347), \\
 (m''', m'')_7 h'' (l'^2 + h'^2) &= -0,000021 (\bar{5}, 3154457), \\
 (m''', m'')_8 h'' (l'^2 + h'^2) &= 0,000038 (\bar{5}, 5752790), \\
 (m''', m'')_9 [h''' (h'^2 - l'^2) + 2h'' l' l''] &= 0,000103 (\bar{4}, 0112694),
 \end{aligned}$$

$$\begin{aligned}
& \frac{1}{2} (m''', m'')_4 [h''' (h'^2 - l'^2) + 2h' l' l'''] = -0,000066 (\bar{5}, 8200249), \\
& (m''', m'')_{10} [h' (q' - q''')^2 - l' (p' (q' - q''') - q''' (p' - p'''))] = 0,000206 (\bar{4}, 3135519), \\
& (m''', m'')_{11} [h' (q' - q''')^2 - l' (p' (q' - q''') - q''' (p' - p'''))] = 0,000244 (\bar{4}, 3883377), \\
& (m''', m'')_{12} [h' (q' - q''')^2 - l' (p' (q' - q''') - q''' (p' - p'''))] = -0,000007 (\bar{6}, 8259557), \\
& (m''', m'')_{13} [-h''' ((q' - q''')^2 - (p' - p''')^2) + 2l''' (p' - p''') (q' - q''')] = 0,000026 (\bar{5}, 4087516), \\
& (m''', m'')_{14} [-h''' ((q' - q''')^2 - (p' - p''')^2) + 2l''' (p' - p''') (q' - q''')] = -0,000061 (\bar{5}, 7829147), \\
& (m''', m'')_{15} [h' ((q' - q''')^2 + (p' - p''')^2) - 2l' (q'' p' - q' p''')] = -0,000185 (\bar{4}, 2677789), \\
& (m''', m'')_{16} [h' ((q' - q''')^2 + (p' - p''')^2) - 2l' (q'' p' - q' p''')] = 0,000201 (\bar{4}, 3035031), \\
& \frac{1}{2} (m''', m'') h''' (l''^2 + h''^2) = -0,000118 (\bar{4}, 0725888), \\
& \frac{1}{2} [m''', m''] h' (l''^2 + h''^2) = 0,000030 (\bar{5}, 4851752).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,034239,

« « « третьяго порядка = -0,000525.

Марсъ и Уранъ.

$$\begin{aligned}
& (m''', m'^I) h''' = -0,000632, \quad [m''', m'^I] h'^I = 0,000015, \\
& (m''', m'^I)_1 h''' [l'^{I2} + h'^{I2} - (q'^I - q''')^2 - (p'^I - p''')^2] = 0,000000 (\bar{8}, 0220792), \\
& (m''', m'^I)_4 h''' [l'^{I2} + h'^{I2} - (q'^I - q''')^2 - (p'^I - p''')^2] = -0,000002 (\bar{6}, 2258651), \\
& (m''', m'^I)_2 h''' (l''^2 + h''^2) = 0,000001 (\bar{6}, 1404782), \\
& (m''', m'^I)_3 h''' (l''^2 + h''^2) = -0,000001 (\bar{6}, 1629708), \\
& (m''', m'^I)_5 [2h''' (l''' l'^I + h''' h'^I) + h'^I (l''^2 + h''^2)] = -0,000041 (\bar{5}, 6181658), \\
& (m''', m'^I)_6 [2h''' (l''' l'^I + h''' h'^I) + h'^I (l''^2 + h''^2)] = 0,000041 (\bar{5}, 6128641), \\
& (m''', m'^I)_7 h'^I (l'^{I2} + h'^{I2}) = -0,000000 (\bar{8}, 4601104), \\
& (m''', m'^I)_8 h'^I (l'^{I2} + h'^{I2}) = 0,000000 (\bar{8}, 7125587), \\
& (m''', m'^I)_9 [h''' (h'^{I2} - l'^{I2}) + 2h'^I l' l'''] = 0,000003 (\bar{6}, 4702113), \\
& \frac{1}{2} (m''', m'^I)_4 [h''' (h'^{I2} - l'^{I2}) + 2h'^I l' l'''] = -0,000002 (\bar{6}, 2559572), \\
& (m''', m'^I)_{10} [h'^I (q'^I - q''')^2 - l'^I (p'^I (q'^I - q''') - q''' (p'^I - p'''))] = 0,000000 (\bar{7}, 6497528), \\
& (m''', m'^I)_{11} [h'^I (q'^I - q''')^2 - l'^I (p'^I (q'^I - q''') - q''' (p'^I - p'''))] = 0,000000 (\bar{7}, 6682458), \\
& (m''', m'^I)_{12} [h'^I (q'^I - q''')^2 - l'^I (p'^I (q'^I - q''') - q''' (p'^I - p'''))] = -0,000000 (\bar{9}, 5142618), \\
& (m''', m'^I)_{13} [-h''' ((q'^I - q''')^2 - (p'^I - p''')^2) + 2l''' (p'^I - p''') (q'^I - q''')] = -0,000000 (7, 6533136), \\
& (m''', m'^I)_{14} [-h''' ((q'^I - q''')^2 - (p'^I - p''')^2) + 2l''' (p'^I - p''') (q'^I - q''')] = 0,000000 (\bar{7}, 8228351),
\end{aligned}$$

$$(m''', m''')_{15} [h'' (q'' - q''')^2 + (p'' - p''')^2 - 2l'' (q'' p'' - q'' p''')] = -0,000002 (\bar{6}, 2908969),$$

$$(m''', m''')_{16} [h'' (q'' - q''')^2 + (p'' - p''')^2 - 2l'' (q'' p'' - q'' p''')] = 0,000002 (\bar{6}, 2995255),$$

$$\frac{1}{2} (m''', m''') h''' (l'''^2 + h'''^2) = -0,000003 (\bar{6}, 4387074),$$

$$\frac{1}{2} [m''', m'''] h''' (l'''^2 + h'''^2) = 0,000000 (\bar{8}, 8032001).$$

Слѣд. сумма членовъ перваго порядка = 0,000647,

« « « третьяго порядка = -0,000010.

Юпитеръ и Меркурій.

$$(m'', m) h'' = 0,000001, \quad [m'', m] h = 0,000003,$$

$$(m'', m)_1 h'' [l^2 + h^2 - (q - q'')^2 - (p - p'')^2] = -0,000000 (\bar{10}, 5547709),$$

$$(m'', m)_4 h'' [(l^2 + h^2) - (q - q'')^2 - (p - p'')^2] = 0,000000 (\bar{8}, 8149003),$$

$$(m'', m)_2 h'' (l''^2 + h''^2) = -0,000000 (\bar{10}, 9177996),$$

$$(m'', m)_3 h'' (l''^2 + h''^2) = 0,000000 (\bar{10}, 9375819),$$

$$(m'', m)_5 [2h'' (ll'' + hh'') + h (l''^2 + h''^2)] = -0,000000 (\bar{7}, 7459448),$$

$$(m'', m)_6 [2h'' (ll'' + hh'') + h (l''^2 + h''^2)] = 0,000000 (\bar{7}, 7413191),$$

$$(m'', m)_7 h (l^2 + h^2) = -0,000000 (\bar{7}, 0322855),$$

$$(m'', m)_8 h (l^2 + h^2) = 0,000000 (\bar{7}, 2843315),$$

$$(m'', m)_9 [h'' (h^2 - l^2) + 2hll''] = -0,000000 (\bar{7}, 4203505),$$

$$\frac{1}{2} (m'', m)_4 [h'' (h^2 - l^2) + 2hll''] = 0,000000 (\bar{7}, 2051664),$$

$$(m'', m)_{10} [h (q - q'')^2 - l (p (q - q'') - q'' (p - p''))] = 0,000001 (\bar{6}, 1778579),$$

$$(m'', m)_{11} [h (q - q'')^2 - l (p (q - q'') - q'' (p - p''))] = 0,000001 (\bar{6}, 1940838),$$

$$(m'', m)_{12} [h (q - q'')^2 - l (p (q - q'') - q'' (p - p''))] = -0,000000 (\bar{9}, 9839185),$$

$$(m'', m)_{13} [-h'' ((q - q'')^2 - (p - p'')^2) + 2l'' (p - p'') (q - q'')] = -0,000000 (\bar{8}, 7763130),$$

$$(m'', m)_{14} [-h'' ((q - q'')^2 - (p - p'')^2) + 2l'' (p - p'') (q - q'')] = 0,000000 (\bar{7}, 1456445),$$

$$(m'', m)_{15} [h ((q - q'')^2 + (p - p'')^2) - 2l (q'' p - q p'')] = -0,000002 (\bar{6}, 3467629),$$

$$(m'', m)_{16} [h ((q - q'')^2 + (p - p'')^2) - 2l (q'' p - q p'')] = 0,000002 (\bar{6}, 3543266),$$

$$\frac{1}{2} (m'', m) h'' (l''^2 + h''^2) = 0,000000 (\bar{9}, 2163785),$$

$$\frac{1}{2} [m'', m] h [l''^2 + h''^2] = 0,000000 (\bar{9}, 5130249).$$

Слѣд. сумма членовъ перваго порядка = 0,000002,

« « « третьяго порядка = 0,000000.

Юпитеръ и Венера.

$$\begin{aligned}
(m^{IV}m')h^{IV} &= 0,000038, & [m^{IV}m']h' &= 0,000004, \\
(m^{IV}m')_1 h^{IV} [l'^2 + h'^2 - (q' - q^{IV})^2 - (p' - p^{IV})^2] &= 0,000000 (\bar{9},2343363), \\
(m^{IV}m')_4 h^{IV} [l'^2 + h'^2 - (q' - q^{IV})^2 - (p' - p^{IV})^2] &= -0,000000 (\bar{8},9595979), \\
(m^{IV}m')_2 h^{IV} (l^{IV2} + h^{IV2}) &= -0,000000 (\bar{8},3517919), \\
(m^{IV}m')_3 h^{IV} (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{8},4180322), \\
(m^{IV}m')_5 [2h^{IV} (l'l^{IV} + h'h^{IV}) + h' (l^{IV2} + h^{IV2})] &= -0,000018 (\bar{7},1505102), \\
(m^{IV}m')_6 [2h^{IV} (l'l^{IV} + h'h^{IV}) + h' (l^{IV2} + h^{IV2})] &= 0,000000 (\bar{8},8322499), \\
(m^{IV}m')_7 h' (l'^2 + h'^2) &= -0,000000 (\bar{10},2168037), \\
(m^{IV}m')_8 h' (l'^2 + h'^2) &= 0,000000 (\bar{10},4742321), \\
(m^{IV}m')_9 [h^{IV} (h'^2 - l'^2) + 2h'l'l^{IV}] &= 0,000000 (\bar{8},0315216), \\
\frac{1}{2} (m^{IV}m')_4 [h^{IV} (h'^2 - l'^2) + 2h'l'l^{IV}] &= -0,000000 (\bar{9},8328833), \\
(m^{IV}m')_{10} [h' (q' - q^{IV})^2 - l' (p' (q' - q^{IV}) - q^{IV} (p' - p^{IV}))] &= 0,000000 (\bar{7},1225889), \\
(m^{IV}m')_{11} [h' (q' - q^{IV})^2 - l' (p' (q' - q^{IV}) - q^{IV} (p' - p^{IV}))] &= 0,000000 (\bar{7},1792391), \\
(m^{IV}m')_{12} [h' (q' - q^{IV})^2 - l' (p' (q' - q^{IV}) - q^{IV} (p' - p^{IV}))] &= -0,000000 (\bar{9},5011087), \\
(m^{IV}m')_{13} [-h^{IV} ((q' - q^{IV})^2 - (p' - p^{IV})^2) + 2l^{IV} (p' - p^{IV}) (q' - q^{IV})] &= -0,000000 (\bar{7},3407102), \\
(m^{IV}m')_{14} [-h^{IV} ((q' - q^{IV})^2 - (p' - p^{IV})^2) + 2l^{IV} (p' - p^{IV}) (q' - q^{IV})] &= 0,000000 (\bar{7},7133882), \\
(m^{IV}m')_{15} [h' ((q' - q^{IV}) + (p' - p^{IV})^2) - 2l' (q^{IV}p' - q'p^{IV})] &= -0,000000 (\bar{8},7252264), \\
(m^{IV}m')_{16} [h' ((q' - q^{IV})^2 + (p' - p^{IV})^2) - 2l' (q^{IV}p' - q'p^{IV})] &= 0,000000 (\bar{8},7252264), \\
\frac{1}{2} (m^{IV}m') h^{IV} (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{8},6438500), \\
\frac{1}{2} [m^{IV}m'] h' (l^{IV2} + h^{IV2}) &= 0,000000 (\bar{9},6432120).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,000034,

« « « третьяго порядка = 0,000000.

Юпитеръ и Земля.

$$\begin{aligned}
(m^{IV}m'')h^{IV} &= 0,000084, & [m^{IV}m'']h'' &= 0,000036, \\
(m^{IV}m'')_1 h'' [l''^2 + h''^2 - (q'' - q^{IV})^2 - (p'' - p^{IV})^2] &= 0,001000 (\bar{9},0886679), \\
(m^{IV}m'')_4 h'' [l''^2 + h''^2 - (q'' - q^{IV})^2 - (p'' - p^{IV})^2] &= -0,000000 (\bar{8},5429181), \\
(m^{IV}m'')_2 h^{IV} (l^{IV2} + h^{IV2}) &= -0,000000 (\bar{8},7056856),
\end{aligned}$$

$$\begin{aligned}
(m^{IV}, m'')_3 h^{IV} (l'^{IV2} + h'^{IV2}) &= 0,000000 (\bar{8}, 8260984), \\
(m^{IV}, m'')_5 [2h^{IV} (l'' l'^{IV} + h'' h'^{IV}) + h'' (l'^{IV2} + h'^{IV2})] &= -0,000000 (\bar{7}, 9654969), \\
(m^{IV}, m'')_6 [2h^{IV} (l'' l'^{IV} + h'' h'^{IV}) + h'' (l'^{IV2} + h'^{IV2})] &= 0,000000 (\bar{8}, 9296772), \\
(m^{IV}, m'')_7 h'' (l'^{IV2} + h'^{IV2}) &= -0,000000 (\bar{9}, 9805894), \\
(m^{IV}, m'')_8 h'' (l'^{IV2} + h'^{IV2}) &= 0,000000 (\bar{8}, 2448491), \\
(m^{IV}, m'')_9 [h^{IV} (h''^2 - l''^2) + 2h'' l'' l'^{IV}] &= 0,000000 (\bar{8}, 0316676), \\
\frac{1}{2} (m^{IV}, m'')_4 [h^{IV} (h''^2 - l''^2) + 2h'' l'' l'^{IV}] &= -0,000000 (\bar{8}, 1550637), \\
(m^{IV}, m'')_{10} [h'' (q'' - q'^{IV})^2 - l'' (p'' (q'' - q'^{IV}) - q'^{IV} (p'' - p'^{IV}))] &= -0,000000 (\bar{9}, 6116154), \\
(m^{IV}, m'')_{11} [h'' (q'' - q'^{IV})^2 - l'' (p'' (q'' - q'^{IV}) - q'^{IV} (p'' - p'^{IV}))] &= -0,000000 (\bar{9}, 7199149), \\
(m^{IV}, m'')_{12} [h'' (q'' - q'^{IV})^2 - l'' (p'' (q'' - q'^{IV}) - q'^{IV} (p'' - p'^{IV}))] &= 0,000000 (\bar{10}, 3094204), \\
(m^{IV}, m'')_{13} [-h^{IV} ((q'' - q'^{IV})^2 - (p'' - p'^{IV})^2) + 2l^{IV} (p'' - p'^{IV}) (q'' - q'^{IV})] &= 0,000000 (\bar{8}, 2617139), \\
(m^{IV}, m'')_{14} [-h^{IV} ((q'' - q'^{IV})^2 - (p'' - p'^{IV})^2) + 2l^{IV} (p'' - p'^{IV}) (q'' - q'^{IV})] &= -0,000000 (\bar{8}, 6385954), \\
(m^{IV}, m'')_{15} [h'' ((q'' - q'^{IV})^2 + (p'' - p'^{IV})^2) - 2l'' (q'^{IV} p'' - q'' p'^{IV})] &= -0,000000 (\bar{7}, 3142257), \\
(m^{IV}, m'')_{16} [h'' ((q'' - q'^{IV})^2 + (p'' - p'^{IV})^2) - 2l'' (q'^{IV} p'' - q'' p'^{IV})] &= 0,000000 (\bar{7}, 3666848), \\
\frac{1}{2} (m^{IV}, m'') h^{IV} (l'^{IV2} + h'^{IV2}) &= 0,000000 (\bar{8}, 9885246), \\
\frac{1}{2} [m^{IV}, m''] h'' (h'^{IV2} + h'^{IV2}) &= 0,000000 (\bar{8}, 6180405).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,000048$,

« « « третьяго порядка = $0,000000$.

Юпитеръ и Марсъ.

$$\begin{aligned}
(m^{IV}, m''') h^{IV} &= 0,000029, \quad [m^{IV}, m'''] = -0,000048, \\
(m^{IV}, m''')_1 h^{IV} [l'''^2 + h'''^2 - (q''' - q'^{IV})^2 - (p''' - p'^{IV})^2] &= -0,000000 (\bar{8}, 5637151), \\
(m^{IV}, m''')_4 h^{IV} [l'''^2 + h'''^2 - (q''' - q'^{IV})^2 - (p''' - p'^{IV})^2] &= 0,000000 (\bar{7}, 6801282), \\
(m^{IV}, m''')_2 h^{IV} (l'^{IV2} + h'^{IV2}) &= -0,000000 (\bar{8}, 2723160), \\
(m^{IV}, m''')_3 h^{IV} (l'^{IV2} + h'^{IV2}) &= 0,000000 (\bar{8}, 5191183), \\
(m^{IV}, m''')_5 [2h^{IV} (l'' l'^{IV} + h'' h'^{IV}) + h'' (l'^{IV2} + h'^{IV2})] &= 0,000002 (\bar{6}, 2844177), \\
(m^{IV}, m''')_6 [2h^{IV} (l'' l'^{IV} + h'' h'^{IV}) + h'' (l'^{IV2} + h'^{IV2})] &= -0,000001 (\bar{6}, 1781869), \\
(m^{IV}, m''')_7 h''' (l'''^2 + h'''^2) &= 0,000000 (\bar{7}, 6333739), \\
(m^{IV}, m''')_8 h''' (l'''^2 + h'''^2) &= -0,000000 (\bar{7}, 9162975), \\
(m^{IV}, m''')_9 [h^{IV} (h'''^2 - l'''^2) + 2h''' l''' l'^{IV}] &= 0,000001 (\bar{6}, 1980261),
\end{aligned}$$

$$\begin{aligned}
& \frac{1}{2} (m^{IV} m''')_4 [h^{IV} (h'''^2 - l'''^2) + 2h''' l''' l^{IV}] = -0,000001 (\bar{6},0778482), \\
& (m^{IV} m''')_{10} [h''' (q''' - q^{IV})^2 - l''' (p''' (q''' - q^{IV}) - q^{IV} (p''' - p^{IV}))] = -0,000000 (\bar{7},4888720), \\
& (m^{IV} m''')_{11} [h''' (q''' - q^{IV})^2 - l''' (p''' (q''' - q^{IV}) - q^{IV} (p''' - p^{IV}))] = -0,000000 (\bar{7},7408991), \\
& (m^{IV} m''')_{12} [h''' (q''' - q^{IV})^2 - l''' (p''' (q''' - q^{IV}) - q^{IV} (p''' - p^{IV}))] = 0,000000 (\bar{8},6601207), \\
& (m^{IV} m''')_{13} [-h^{IV} ((q''' - q^{IV})^2 - (p''' - p^{IV})^2) + 2l^{IV} (p''' - p^{IV}) (q''' - q^{IV})] = -0,000000 (\bar{8},8377743), \\
& (m^{IV} m''')_{14} [-h^{IV} ((q''' - q^{IV})^2 - (p''' - p^{IV})^2) + 2l^{IV} (p''' - p^{IV}) (q''' - q^{IV})] = 0,000000 (\bar{7},0458968), \\
& (m^{IV} m''')_{15} [h''' ((q''' - q^{IV})^2 + (p''' - p^{IV})^2) - 2l''' (q^{IV} p''' - q''' p^{IV})] = -0,000000 (\bar{7},6035564), \\
& (m^{IV} m''')_{16} [h''' ((q''' - q^{IV})^2 + (p''' - p^{IV})^2) - 2l''' (q^{IV} p''' - q''' p^{IV})] = 0,000000 (\bar{7},7331509), \\
& \frac{1}{2} (m^{IV} m''') h^{IV} (l^{IV^2} + h^{IV^2}) = 0,000000 (\bar{8},5240446), \\
& \frac{1}{2} [m^{IV} m'''] h''' (l^{IV^2} + h^{IV^2}) = -0,000000 (\bar{8},7501967).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,000077,

« « « третьяго порядка = -0,000001.

Юпитеръ и Сатурнъ.

$$\begin{aligned}
& (m^{IV} m^V) h^{IV} = 0,068543, \quad [m^{IV} m^V] h^V = 0,270676, \\
& (m^{IV} m^V)_1 h^{IV} [l^{V^2} + h^{V^2} - (q^V - q^{IV})^2 - (p^V - p^{IV})^2] = 0,000010 (\bar{5},0079858), \\
& (m^{IV} m^V)_4 h^{IV} [l^{V^2} + h^{V^2} - (q^V - q^{IV})^2 - (p^V - p^{IV})^2] = -0,000050 (\bar{5},6965206), \\
& (m^{IV} m^V)_2 h^{IV} (l^{IV^2} + h^{IV^2}) = -0,000078 (\bar{5},8917928), \\
& (m^{IV} m^V)_3 h^{IV} (l^{IV^2} + h^{IV^2}) = 0,000278 (\bar{4},4437207), \\
& (m^{IV} m^V)_5 [2h^{IV} (l^{IV} l^V + h^{IV} h^V) + h^V (l^{IV^2} + h^{IV^2})] = -0,001439 (\bar{3},1581335), \\
& (m^{IV} m^V)_6 [2h^{IV} (l^{IV} l^V + h^{IV} h^V) + h^V (l^{IV^2} + h^{IV^2})] = -0,004510 (\bar{3},6542013), \\
& (m^{IV} m^V)_7 h^V (l^{V^2} + h^{V^2}) = -0,001454 (\bar{3},1627128), \\
& (m^{IV} m^V)_8 h^V (l^{V^2} + h^{V^2}) = 0,003315 (\bar{3},5205514), \\
& (m^{IV} m^V)_9 [h^{IV} (h^{V^2} - l^{V^2}) + 2h^{IV} l^{IV} l^V] = -0,000377 (\bar{4},5762751), \\
& \frac{1}{2} (m^{IV} m^V)_4 [h^{IV} (h^{V^2} - l^{V^2}) + 2h^{IV} l^{IV} l^V] = 0,000489 (\bar{4},6890665), \\
& (m^{IV} m^V)_{10} [h^V (q^V - q^{IV})^2 - l^V (p^V (q^V - q^{IV}) - q^{IV} (p^V - p^{IV}))] = 0,000007 (\bar{6},8612453), \\
& (m^{IV} m^V)_{11} [h^V (q^V - q^{IV})^2 - l^V (p^V (q^V - q^{IV}) - q^{IV} (p^V - p^{IV}))] = 0,000059 (\bar{5},7693947), \\
& (m^{IV} m^V)_{12} [h^V (q^V - q^{IV})^2 - l^V (p^V (q^V - q^{IV}) - q^{IV} (p^V - p^{IV}))] = -0,000012 (\bar{5},0952413), \\
& (m^{IV} m^V)_{13} [-h^{IV} ((q^V - q^{IV})^2 - (p^V - p^{IV})^2) + 2l^{IV} (p^V - p^{IV}) (q^V - q^{IV})] = 0,000211 (\bar{4},3239157), \\
& (m^{IV} m^V)_{14} [-h^{IV} ((q^V - q^{IV})^2 - (p^V - p^{IV})^2) + 2l^{IV} (p^V - p^{IV}) (q^V - q^{IV})] = -0,000567 (\bar{4},7533022),
\end{aligned}$$

$$(m^{IV} m^V)_{15} [h^V ((q^V - q^{IV})^2 + (p^V - p^{IV})^2) - 2l^V (q^{IV} p^V - q^V p^{IV})] = -0,000142 (\bar{4}, 1512849),$$

$$(m^{IV} m^V)_{16} [h^V ((q^V - q^{IV})^2 + (p^V - p^{IV})^2) - 2l^V (q^{IV} p^V - q^V p^{IV})] = 0,000626 (\bar{4}, 7968637),$$

$$\frac{1}{2} (m^{IV} m^V) h^{IV} (l^{IV2} + h^{IV2}) = 0,000079 (\bar{5}, 9002379),$$

$$\frac{1}{2} [m^{IV} m^V] h^V (l^{IV2} + h^{IV2}) = 0,000348 (\bar{4}, 5417203).$$

Слѣд. сумма членовъ перваго порядка = 0,202133,

« « « третьяго порядка = -0,010611.

Юпитеръ и Уранъ.

$$(m^{IV} m^{VI}) h^{IV} = 0,000979, \quad [m^{IV} m^{VI}] h^{VI} = 0,000357,$$

$$(m^{IV} m^{VI})_1 h^{IV} [l^{VI2} + h^{VI2} - (q^{VI} - q^{IV})^2 - (p^{VI} - p^{IV})^2] = -0,000000 (\bar{7}, 4059679),$$

$$(m^{IV} m^{VI})_4 h^{IV} [l^{VI2} + h^{VI2} - (q^{VI} - q^{IV})^2 - (p^{VI} - p^{IV})^2] = 0,000004 (\bar{6}, 5821428),$$

$$(m^{IV} m^{VI})_2 h^{IV} (l^{IV2} + h^{IV2}) = -0,000000 (\bar{7}, 7947218),$$

$$(m^{IV} m^{VI})_3 h^{IV} (l^{IV2} + h^{IV2}) = 0,000001 (\bar{6}, 0127551),$$

$$(m^{IV} m^{VI})_5 [2h^{IV} (l^{IV} l^{VI} + h^{IV} h^{VI}) + h^{VI} (l^{IV2} + h^{IV2})] = 0,000003 (\bar{6}, 4724362),$$

$$(m^{IV} m^{VI})_6 [2h^{IV} (l^{IV} l^{VI} + h^{IV} h^{VI}) + h^{VI} (l^{IV2} + h^{IV2})] = -0,000001 (\bar{6}, 0858772),$$

$$(m^{IV} m^{VI})_7 h^{VI} (l^{VI2} + h^{VI2}) = -0,000000 (\bar{7}, 8894402),$$

$$(m^{IV} m^{VI})_8 h^{VI} (l^{VI2} + h^{VI2}) = 0,000001 (\bar{6}, 1677354),$$

$$(m^{IV} m^{VI})_9 [h^{IV} (h^{VI2} - l^{VI2}) + 2h^{VI} l^{VI} l^{IV}] = 0,000008 (\bar{6}, 9312790),$$

$$\frac{1}{2} (m^{IV} m^{VI})_4 [h^{IV} (h^{VI2} - l^{VI2}) + 2h^{VI} l^{VI} l^{IV}] = -0,000006 (\bar{6}, 7968474),$$

$$(m^{IV} m^{VI})_{10} [h^{VI} (q^{VI} - q^{IV})^2 - l^{VI} (p^{VI} (q^{VI} - q^{IV}) - q^{IV} (p^{VI} - p^{IV}))] = -0,000000 (\bar{8}, 2538712),$$

$$(m^{IV} m^{VI})_{11} [h^{VI} (q^{VI} - q^{IV})^2 - l^{VI} (p^{VI} (q^{VI} - q^{IV}) - q^{IV} (p^{VI} - p^{IV}))] = -0,000000 (\bar{8}, 4698546),$$

$$(m^{IV} m^{VI})_{12} [h^{VI} (q^{VI} - q^{IV})^2 - l^{VI} (p^{VI} (q^{VI} - q^{IV}) - q^{IV} (p^{VI} - p^{IV}))] = 0,000000 (\bar{9}, 3311893),$$

$$(m^{IV} m^{VI})_{13} [-h^{IV} ((q^{VI} - q^{IV})^2 - (p^{VI} - p^{IV})^2) + 2l^{IV} (p^{VI} - p^{IV}) (q^{VI} - q^{IV})] = 0,000000 (\bar{7}, 7581054),$$

$$(m^{IV} m^{VI})_{14} [-h^{IV} ((q^{VI} - q^{IV})^2 - (p^{VI} - p^{IV})^2) + 2l^{IV} (p^{VI} - p^{IV}) (q^{VI} - q^{IV})] = -0,000001 (\bar{6}, 1434721),$$

$$(m^{IV} m^{VI})_{15} [h^{VI} ((q^{VI} - q^{IV})^2 + (p^{VI} - p^{IV})^2) - 2l^{VI} (q^{IV} p^{VI} - q^{VI} p^{IV})] = -0,000002 (\bar{6}, 3163398),$$

$$(m^{IV} m^{VI})_{16} [h^{VI} ((q^{VI} - q^{IV})^2 + (p^{VI} - p^{IV})^2) - 2l^{VI} (q^{IV} p^{VI} - q^{VI} p^{IV})] = 0,000003 (\bar{6}, 4257457),$$

$$\frac{1}{2} (m^{IV} m^{VI}) h^{IV} (l^{IV2} + h^{IV2}) = 0,000001 (\bar{6}, 0550240),$$

$$\frac{1}{2} [m^{IV} m^{VI}] h^{VI} (l^{IV2} + h^{IV2}) = 0,000000 (\bar{7}, 6165170).$$

Слѣд. сумма членовъ перваго порядка = -0,000622,

« « « третьяго порядка = -0,000000.



Сатурнъ и Меркурій.

$$\begin{aligned}
(m', m) h' &= 0,000010, & [m', m] h &= 0,000018, \\
(m', m)_1 h' [l'^2 + h'^2 - (q - q')^2 - (p - p')^2] &= -0,000000 (\bar{12},8748046), \\
(m', m)_4 h' [l'^2 + h'^2 - (q - q')^2 - (p - p')^2] &= 0,000000 (\bar{9},6591358), \\
(m', m)_2 h' (l'^2 + h'^2) &= -0,000000 (\bar{10},9059464), \\
(m', m)_3 h' (l'^2 + h'^2) &= 0,000000 (\bar{10},9119040), \\
(m', m)_5 [2h' (ll' + hh') + h (l'^2 + h'^2)] &= -0,000000 (\bar{7},6236685), \\
(m', m)_6 [2h' (ll' + hh') + h (l'^2 + h'^2)] &= 0,000000 (\bar{7},6223170), \\
(m', m)_7 h (l'^2 + h'^2) &= -0,000000 (\bar{9},8881768), \\
(m', m)_8 h (l'^2 + h'^2) &= 0,000000 (\bar{8},0928864), \\
(m', m)_9 [h' (h^2 - l'^2) + 2hll'] &= -0,000000 (\bar{8},6675325), \\
\frac{1}{2} (m', m)_4 [h' (h^2 - l'^2) + 2hll'] &= 0,000000 (\bar{8},4476675), \\
(m', m)_{10} [h (q - q')^2 - l (p (q - q') - q' (p - p'))] &= -0,000000 (\bar{7},9476560), \\
(m', m)_{11} [h (q - q')^2 - l (p (q - q') - q' (p - p'))] &= -0,000000 (\bar{7},9524833), \\
(m', m)_{12} [h (q - q')^2 - l (p (q - q') - q' (p - p'))] &= 0,000000 (\bar{9},2189484), \\
(m', m)_{13} [-h' ((q - q')^2 - (p - p')^2) + 2l' (p - p') (q - q')] &= 0,000000 (\bar{9},7028619), \\
(m', m)_{14} [-h' ((q - q')^2 - (p - p')^2) + 2l' (p - p') (q - q')] &= -0,000000 (\bar{8},0712426), \\
(m', m)_{15} [h ((q - q')^2 + (p - p')^2) - 2l (q'p - qp')] &= -0,000000 (\bar{7},8332660), \\
(m', m)_{16} [h ((q - q')^2 + (p - p')^2) - 2l (q'p - qp')] &= 0,000000 (\bar{7},8355056), \\
\frac{1}{2} (m', m) h' (l'^2 + h'^2) &= 0,000000 (\bar{9},2062575), \\
\frac{1}{2} [m', m] h (l'^2 + h'^2) &= 0,000000 (\bar{9},4588002),
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000008,

« « « третьяго порядка = 0,000000.

Сатурнъ и Венера.

$$\begin{aligned}
(m', m') h' &= 0,000027, & [m', m'] h' &= 0,000000, \\
(m', m')_1 h' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= 0,000000 (\bar{9},7139882), \\
(m', m')_4 h' [l'^2 + h'^2 - (q' - q'')^2 - (p' - p'')^2] &= -0,000000 (\bar{7},9577316), \\
(m', m')_2 h' (l'^2 + h'^2) &= -0,000000 (\bar{8},3272224),
\end{aligned}$$



$$\begin{aligned}
(m', m')_3 h' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 3477581), \\
(m', m')_5 [2h' (l'l' + h'h') + h' (l'^2 + h'^2)] &= -0,000000 (\bar{7}, 1992962), \\
(m', m')_6 [2h' (l'l' + h'h') + h' (l'^2 + h'^2)] &= 0,000000 (\bar{7}, 1944914), \\
(m', m')_7 h' (l'^2 + h'^2) &= -0,000000 (\bar{11}, 0135566), \\
(m', m')_8 h' (l'^2 + h'^2) &= 0,000000 (\bar{11}, 2656863), \\
(m', m')_9 [h' (h'^2 - l'^2) + 2h'l'l'] &= -0,000000 (\bar{10}, 5014325), \\
\frac{1}{2} (m', m')_4 [h' (h'^2 - l'^2) + 2h'l'l'] &= 0,000000 (\bar{10}, 2865064), \\
(m', m')_{10} [h' (q' - q')^2 - l' (p' (q' - q') - q' (p' - p'))] &= 0,000000 (\bar{8}, 7752584), \\
(m', m')_{11} [h' (q' - q')^2 - l' (p' (q' - q') - q' (p' - p'))] &= 0,000000 (\bar{8}, 7921135), \\
(m', m')_{12} [h' (q' - q')^2 - l' (p' (q' - q') - q' (p' - p'))] &= -0,000000 (\bar{10}, 5982899), \\
(m', m')_{13} [-h' ((q' - q')^2 - (p' - p')^2) + 2l' (p' - p') (q' - q')] &= 0,000000 (\bar{8}, 1578585), \\
(m', m')_{14} [-h' ((q' - q')^2 - (p' - p')^2) + 2l' (p' - p') (q' - q')] &= -0,000000 (\bar{8}, 4772435), \\
(m', m')_{15} [h' ((q' - q')^2 + (p' - p')^2) - 2l' (q'p' - q'p')] &= 0,000000 (\bar{8}, 307919), \\
(m', m')_{16} [h' ((q' - q')^2 + (p' - p')^2) - 2l' (q'p' - q'p')] &= -0,000000 (\bar{8}, 3151979), \\
\frac{1}{2} (m', m') h' (l'^2 + h'^2) &= 0,000000 (\bar{8}, 6257145), \\
\frac{1}{2} [m', m'] h' (l'^2 + h'^2) &= 0,000000 (\bar{10}, 5814497),
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,000027$,

« « « третьяго порядка = $0,000000$.

Сатурнъ и Земля.

$$\begin{aligned}
(m', m'') h' &= 0,000058, \quad [m', m''] h'' = 0,000002, \\
(m', m'')_1 h' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] &= 0,000000 (\bar{8}, 1968414), \\
(m', m'')_4 h' [l'^2 + h'^2 - (q'' - q')^2 - (p'' - p')^2] &= -0,000000 (\bar{7}, 1623705), \\
(m', m'')_2 h' (l'^2 + h'^2) &= -0,000000 (\bar{9}, 6638349), \\
(m', m'')_3 h' (l'^2 + h'^2) &= 0,000000 (\bar{9}, 7029438), \\
(m', m'')_5 [2h' (l'l' + h'h') + h'' (l'^2 + h'^2)] &= -0,000000 (\bar{7}, 8867847), \\
(m', m'')_6 [2h' (l'l' + h'h') + h'' (l'^2 + h'^2)] &= 0,000000 (\bar{7}, 8773645), \\
(m', m'')_7 h'' (l'^2 + h'^2) &= -0,000000 (\bar{10}, 7596832), \\
(m', m'')_8 h'' (l'^2 + h'^2) &= 0,000000 (\bar{9}, 0138602), \\
(m', m'')_9 [h' (h''^2 - l''^2) + 2h''l'l'] &= -0,000000 (\bar{8}, 2853669),
\end{aligned}$$

*

$$\begin{aligned}
& \frac{1}{2} (m^V m'')_4 [h^V (h''^2 - l''^2) + 2h'' l'' l^V] = 0,000000 (\bar{8},0767353), \\
& (m^V m'')_{10} [h'' (q'' - q^V)^2 - l'' (p'' (q'' - q^V) - q^V (p'' - p^V))] = 0,000000 (\bar{8},2155796), \\
& (m^V m'')_{11} [h'' (q'' - q^V)^2 - l'' (p'' (q'' - q^V) - q^V (p'' - p^V))] = 0,000000 (\bar{8},2477918), \\
& (m^V m'')_{12} [h'' (q'' - q^V)^2 - l'' (p'' (q'' - q^V) - q^V (p'' - p^V))] = -0,000000 (\bar{10},2860864), \\
& (m^V m'')_{13} [-h^V ((q'' - q^V)^2 - (p'' - p^V)^2) + 2l^V (p'' - p^V) (q'' - q^V)] = -0,000000 (\bar{8},7747133), \\
& (m^V m'')_{14} [-h^V ((q'' - q^V)^2 - (p'' - p^V)^2) + 2l^V (p'' - p^V) (q'' - q^V)] = 0,000000 (\bar{7},1453741), \\
& (m^V m'')_{15} [h'' ((q'' - q^V)^2 + (p'' - p^V)^2) - 2l'' (q^V p'' - q'' p^V)] = -0,000000 (\bar{7},1894132), \\
& (m^V m'')_{16} [h'' ((q'' - q^V)^2 + (p'' - p^V)^2) - 2l'' (q^V p'' - q'' p^V)] = 0,000000 (\bar{7},2045293), \\
& \frac{1}{2} (m^V m'') h^V (l'^2 + h'^2) = 0,000000 (\bar{8},9599067), \\
& \frac{1}{2} [m^V m''] h'' (h'^2 + l'^2) = 0,000000 (\bar{9},5464691).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,000056$,

« « « третьяго порядка = $0,000000$.

Сатурнъ и Марсъ.

$$\begin{aligned}
& (m^V m''') h^V = 0,000018, \quad [m^V m'''] h''' = -0,000003, \\
& (m^V m''')_1 h^V [l'''^2 + h'''^2 - (q''' - q^V)^2 - (p''' - p^V)^2] = -0,000000 (\bar{9},7168496), \\
& (m^V m''')_4 h^V [l'''^2 + h'''^2 - (q''' - q^V)^2 - (p''' - p^V)^2] = 0,000000 (\bar{7},3251474), \\
& (m^V m''')_2 h^V (l'^2 + h'^2) = -0,000000 (\bar{8},1760711), \\
& (m^V m''')_3 h^V (l'^2 + h'^2) = 0,000000 (\bar{8},2619581), \\
& (m^V m''')_5 [2h^V (l'' l^V + h''' h^V) + h''' (l'^2 + h'^2)] = 0,000000 (\bar{7},6198092), \\
& (m^V m''')_6 [2h^V (l'' l^V + h''' h^V) + h''' (l'^2 + h'^2)] = -0,000000 (\bar{7},5963872), \\
& (m^V m''')_7 h''' (l'''^2 + h'''^2) = 0,000000 (\bar{8},3610617), \\
& (m^V m''')_8 h''' (l'''^2 + h'''^2) = -0,000000 (\bar{8},6208955), \\
& (m^V m''')_9 [h^V (h'''^2 - l'''^2) + 2h''' l''' l^V] = 0,000000 (\bar{8},0754687), \\
& \frac{1}{2} (m^V m''')_4 [h^V (h'''^2 - l'''^2) + 2h''' l''' l^V] = -0,000000 (\bar{9},8842246), \\
& (m^V m''')_{10} [h''' (q''' - q^V)^2 - l''' (p''' (q''' - q^V) - q^V (p''' - p^V))] = -0,000000 (\bar{7},1792398), \\
& (m^V m''')_{11} [h''' (q''' - q^V)^2 - l''' (p''' (q''' - q^V) - q^V (p''' - p^V))] = -0,000000 (\bar{7},2540256), \\
& (m^V m''')_{12} [h''' (q''' - q^V)^2 - l''' (p''' (q''' - q^V) - q^V (p''' - p^V))] = 0,000000 (\bar{9},6916436), \\
& (m^V m''')_{13} [-h^V ((q''' - q^V)^2 - (p''' - p^V)^2) + 2l^V (p''' - p^V) (q''' - q^V)] = 0,000000 (\bar{8},2357976), \\
& (m^V m''')_{14} [-h^V ((q''' - q^V)^2 - (p''' - p^V)^2) + 2l^V (p''' - p^V) (q''' - q^V)] = -0,000000 (\bar{8},6099607),
\end{aligned}$$

$$(m^V, m''')_{15} [h'''(q''' - q^V)^2 + (p''' - p^V)^2 - 2l'''(q^V p''' - q''' p^V)] = -0,000000(\bar{7}, 1468430),$$

$$(m^V, m''')_{16} [h'''(q''' - q^V)^2 + (p''' - p^V)^2 - 2l'''(q^V p''' - q''' p^V)] = 0,000000(\bar{7}, 1825672),$$

$$\frac{1}{2}(m^V, m''') h^V (l^{V2} + h^{V2}) = 0,000000(\bar{8}, 4650068),$$

$$\frac{1}{2}[m^V, m'''] h''' (l^{V2} + h^{V2}) = -0,000000(\bar{9}, 6502444).$$

Слѣд. сумма членовъ перваго порядка = $-0,000021$,

« « « третьяго порядка = $0,000000$.

Сатурнъ и Юпитеръ.

$$(m^V, m^{IV}) h^V = 1,022754, \quad [m^V, m^{IV}] h^{IV} = 0,110692,$$

$$(m^V, m^{IV})_1 h^V [l^{IV2} + h^{IV2} - (q^{IV} - q^V)^2 - (p^{IV} - p^V)^2] = -0,001701(\bar{3}, 2308648),$$

$$(m^V, m^{IV})_4 h^V [l^{IV2} + h^{IV2} - (q^{IV} - q^V)^2 - (p^{IV} - p^V)^2] = 0,008306(\bar{3}, 9193992),$$

$$(m^V, m^{IV})_2 h^V (l^{V2} + h^{V2}) = -0,001581(\bar{3}, 1989926),$$

$$(m^V, m^{IV})_3 h^V (l^{V2} + h^{V2}) = 0,005635(\bar{3}, 7509205),$$

$$(m^V, m^{IV})_5 [2h^V (l^{IV} l^V + h^{IV} h^V) + h^{IV} (l^{V2} + h^{V2})] = -0,002121(\bar{3}, 3264888),$$

$$(m^V, m^{IV})_6 [2h^V (l^{IV} l^V + h^{IV} h^V) + h^{IV} (l^{V2} + h^{V2})] = -0,006646(\bar{3}, 8225566),$$

$$(m^V, m^{IV})_7 h^{IV} (l^{IV2} + h^{IV2}) = -0,000394(\bar{4}, 5960966),$$

$$(m^V, m^{IV})_8 h^{IV} (l^{IV2} + h^{IV2}) = 0,000899(\bar{4}, 9539352),$$

$$(m^V, m^{IV})_9 [h^V (h^{IV2} - l^{IV2}) + 2h^{IV} l^{IV} l^V] = 0,003714(\bar{3}, 5698397),$$

$$\frac{1}{2}(m^V, m^{IV})_4 [h^V (h^{IV2} - l^{IV2}) + 2h^{IV} l^{IV} l^V] = -0,004815(\bar{3}, 6826311),$$

$$(m^V, m^{IV})_{10} [h^{IV} (q^{IV} - q^V)^2 - l^{IV} (p^{IV} (q^{IV} - q^V) - q^V (p^{IV} - p^V))] = 0,000015(\bar{5}, 1753526),$$

$$(m^V, m^{IV})_{11} [h^{IV} (q^{IV} - q^V)^2 - l^{IV} (p^{IV} (q^{IV} - q^V) - q^V (p^{IV} - p^V))] = 0,000121(\bar{4}, 0835020),$$

$$(m^V, m^{IV})_{12} [h^{IV} (q^{IV} - q^V)^2 - l^{IV} (p^{IV} (q^{IV} - q^V) - q^V (p^{IV} - p^V))] = -0,000026(\bar{5}, 4093486),$$

$$(m^V, m^{IV})_{13} [-h^V ((q^{IV} - q^V)^2 - (p^{IV} - p^V)^2) + 2l^V (p^{IV} - p^V) (q^{IV} - q^V)] = -0,000202(\bar{4}, 3057398),$$

$$(m^V, m^{IV})_{14} [-h^V ((q^{IV} - q^V)^2 - (p^{IV} - p^V)^2) + 2l^V (p^{IV} - p^V) (q^{IV} - q^V)] = 0,000543(\bar{4}, 7351263),$$

$$(m^V, m^{IV})_{15} [h^{IV} ((q^{IV} - q^V)^2 + (p^{IV} - p^V)^2) - 2l^{IV} (q^V p^{IV} - q^{IV} p^V)] = -0,000315(\bar{4}, 4979027),$$

$$(m^V, m^V)_{16} [h^{IV} ((q^{IV} - q^V)^2 + (p^{IV} - p^V)^2) - 2l^{IV} (q^V p^{IV} - q^{IV} p^V)] = 0,001391(\bar{3}, 1434815),$$

$$\frac{1}{2}(m^V, m^{IV}) h^V (l^{V2} + h^{V2}) = 0,001612(\bar{3}, 2074377),$$

$$\frac{1}{2}[m^V, m^{IV}] h^{IV} (l^{V2} + h^{V2}) = 0,000174(\bar{4}, 2417831).$$

Слѣд. сумма членовъ перваго порядка = $-0,912062$,

« « « третьяго порядка = $-0,009245$.

Сатурнъ и Уранъ.

$$\begin{aligned}
(m^V m^{VI}) h^V &= 0,021720, & [m^V m^{VI}] h^{VI} &= 0,002348, \\
(m^V m^{VI})_1 h^V [l^{VI2} + h^{VI2} - (q^{VI} - q^V)^2 - (p^{VI} - p^V)^2] &= -0,000014 (\bar{5},1568732), \\
(m^V m^{VI})_4 h^V [l^{VI2} + h^{VI2} - (q^{VI} - q^V)^2 - (p^{VI} - p^V)^2] &= 0,000079 (\bar{5},9002300), \\
(m^V m^{VI})_2 h^V (l^{V2} + h^{V2}) &= -0,000028 (\bar{5},4515758), \\
(m^V m^{VI})_3 h^V (l^{V2} + h^{V2}) &= 0,000090 (\bar{5},9570982), \\
(m^V m^{VI})_5 [2h^V (l^V l^{VI} + h^V h^{VI}) + h^{VI} (l^{V2} + h^{V2})] &= -0,000044 (\bar{5},6439976), \\
(m^V m^{VI})_6 [2h^V (l^V l^{VI} + h^V h^{VI}) + h^{VI} (l^{V2} + h^{V2})] &= 0,000000 (\bar{7},8746926), \\
(m^V m^{VI})_7 h^{VI} (l^{VI2} + h^{VI2}) &= -0,000007 (\bar{6},8441892), \\
(m^V m^{VI})_8 h^{VI} (l^{VI2} + h^{VI2}) &= 0,000015 (\bar{5},1853114), \\
(m^V m^{VI})_9 [h^V (h^{VI2} - l^{VI2}) + 2h^{VI} l^{VI} l^V] &= 0,000068 (\bar{5},8320530), \\
\frac{1}{2} (m^V m^{VI})_4 [h^V (h^{VI2} - l^{VI2}) + 2h^{VI} l^{VI} l^V] &= -0,000078 (\bar{5},8924483), \\
(m^V m^{VI})_{10} [h^{VI} (q^{VI} - q^V)^2 - l^{VI} (p^{VI} (q^{VI} - q^V) - q^V (p^{VI} - p^V))] &= -0,000001 (\bar{6},1177498), \\
(m^V m^{VI})_{11} [h^{VI} (q^{VI} - q^V)^2 - l^{VI} (p^{VI} (q^{VI} - q^V) - q^V (p^{VI} - p^V))] &= -0,000007 (\bar{6},8627929), \\
(m^V m^{VI})_{12} [h^{VI} (q^{VI} - q^V)^2 - l^{VI} (p^{VI} (q^{VI} - q^V) - q^V (p^{VI} - p^V))] &= 0,000001 (\bar{6},1373765), \\
(m^V m^{VI})_{13} [-h^V ((q^{VI} - q^V)^2 - (p^{VI} - p^V)^2) + 2l^V (p^{VI} - p^V) (q^{VI} - q^V)] &= -0,000009 (\bar{6},9477616), \\
(m^V m^{VI})_{14} [-h^V ((q^{VI} - q^V)^2 - (p^{VI} - p^V)^2) + 2l^V (p^{VI} - p^V) (q^{VI} - q^V)] &= 0,000023 (\bar{5},3685046), \\
(m^V m^{VI})_{15} [h^{VI} ((q^{VI} - q^V)^2 + (p^{VI} - p^V)^2) - 2l^{VI} (q^V p^{VI} - q^{VI} p^V)] &= 0,000007 (\bar{6},8549634), \\
(m^V m^{VI})_{16} [h^{VI} ((q^{VI} - q^V)^2 + (p^{VI} - p^V)^2) - 2l^{VI} (q^V p^{VI} - q^{VI} p^V)] &= -0,000022 (\bar{5},3352189), \\
\frac{1}{2} (m^V m^{VI}) h^V (l^{V2} + h^{V2}) &= 0,000034 (\bar{5},5345349), \\
\frac{1}{2} [m^V m^{VI}] h^{VI} (l^{V2} + h^{V2}) &= 0,000004 (\bar{6},5674953).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = $-0,019372$,

« « « третьяго порядка = $-0,000143$.

Уранъ и Меркурій.

$$\begin{aligned}
(m^{VI} m) h^{VI} &= 0,000000, & [m^{VI} m] h &= 0,000000, \\
(m^{VI} m)_1 h^{VI} [l^2 + h^2 - (q - q^{VI})^2 - (p - p^{VI})^2] &= -0,000000 (\bar{13},4628607), \\
(m^{VI} m)_4 h^{VI} [l^2 + h^2 - (q - q^{VI})^2 - (p - p^{VI})^2] &= 0,000000 (\bar{10},8532811), \\
(m^{VI} m)_2 h^{VI} (l^{VI2} + h^{VI2}) &= -0,000000 (\bar{12},9349976),
\end{aligned}$$

$$\begin{aligned}
(m^{VI}m)_3 h^{VI} (l'^{VI2} + h'^{VI2}) &= 0,000000 (\overline{12},9364767), \\
(m^{VI}m)_5 [2h^{VI} (ll'^{VI} + hh'^{VI}) + h (l'^{VI2} + h'^{VI2})] &= -0,000000 (\bar{8},2130662), \\
(m^{VI}m)_6 [2h^{VI} (ll'^{VI} + hh'^{VI}) + h (l'^{VI2} + h'^{VI2})] &= 0,000000 (\bar{8},2127453), \\
(m^{VI}m)_7 h (l'^2 + h'^2) &= -0,000000 (\bar{8},1704177), \\
(m^{VI}m)_8 h (l'^2 + h'^2) &= 0,000000 (\overline{10},7253661), \\
(m^{VI}m)_9 [h^{VI} (h'^2 - l'^2) + 2hll'^{VI}] &= -0,000000 (\bar{9},0969763), \\
\frac{1}{2} (m^{VI}m)_4 [h^{VI} (h'^2 - l'^2) + 2hll'^{VI}] &= 0,000000 (\overline{10},8756181), \\
(m^{VI}m)_{10} [h (q - q'^{VI})^2 - l (p (q - q'^{VI}) - q'^{VI} (p - p'^{VI}))] &= 0,000001 (\bar{8},6836142), \\
(m^{VI}m)_{11} [h (q - q'^{VI})^2 - l (p (q - q'^{VI}) - q'^{VI} (p - p'^{VI}))] &= 0,000000 (\bar{8},6848079), \\
(m^{VI}m)_{12} [h (q - q'^{VI})^2 - l (p (q - q'^{VI}) - q'^{VI} (p - p'^{VI}))] &= -0,000000 (\overline{11},3454515), \\
(m^{VI}m)_{13} [-h^{VI} ((q - q'^{VI})^2 - (p - p'^{VI})^2) + 2l'^{VI} (p - p'^{VI}) (q - q'^{VI})] &= 0,000000 (\overline{10},8260759), \\
(m^{VI}m)_{14} [-h^{VI} ((q - q'^{VI})^2 - (p - p'^{VI})^2) + 2l'^{VI} (p - p'^{VI}) (q - q'^{VI})] &= -0,000000 (\bar{9},1939051), \\
(m^{VI}m)_{15} [h ((q - q'^{VI})^2 + (p - p'^{VI})^2) - 2l (q'^{VI} p - qp'^{VI})] &= -0,000000 (\bar{8},9919324), \\
(m^{VI}m)_{16} [h ((q - q'^{VI})^2 + (p - p'^{VI})^2) - 2l (q'^{VI} p - qp'^{VI})] &= 0,000000 (\bar{8},9924819), \\
\frac{1}{2} (m^{VI}m) h^{VI} (l'^{VI2} + h'^{VI2}) &= 0,000000 (\overline{11},2358506), \\
\frac{1}{2} [m^{VI}m] h [l'^{VI2} + h'^{VI2}] &= 0,000000 (\overline{12},9276748).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,000000,

« « « третьяго порядка = 0,000000.

Уранъ и Венера.

$$\begin{aligned}
(m^{VI}m') h^{VI} &= 0,000000, \quad [m^{VI}m'] h' = 0,000000, \\
(m^{VI}m')_1 h^{VI} [l'^2 + h'^2 - (q' - q'^{VI})^2 - (p' - p'^{VI})^2] &= 0,000000 (\overline{12},2579161), \\
(m^{VI}m')_4 h^{VI} [l'^2 + h'^2 - (q' - q'^{VI})^2 - (p' - p'^{VI})^2] &= -0,000000 (\bar{9},1059009), \\
(m^{VI}m')_2 h^{VI} (l'^{VI2} + h'^{VI2}) &= -0,000000 (\overline{10},3523702), \\
(m^{VI}m')_3 h^{VI} (l'^{VI2} + h'^{VI2}) &= 0,000000 (\overline{10},3575092), \\
(m^{VI}m')_5 [2h^{VI} (ll'^{VI} + h'h'^{VI}) + h' (l'^{VI2} + h'^{VI2})] &= -0,000000 (\bar{8},0070973), \\
(m^{VI}m')_6 [2h^{VI} (ll'^{VI} + h'h'^{VI}) + h' (l'^{VI2} + h'^{VI2})] &= 0,000000 (\bar{8},0039230), \\
(m^{VI}m')_7 h' (l'^2 + h'^2) &= -0,000000 (\overline{13},6423500), \\
(m^{VI}m')_8 h' (l'^2 + h'^2) &= 0,000000 (\overline{13},8927758), \\
(m^{VI}m')_9 [h^{VI} (h'^2 - l'^2) + 2h'l'l'^{VI}] &= -0,000000 (\overline{10},0509800),
\end{aligned}$$

$$\begin{aligned}
\frac{1}{2} (m, m')_4 [h^{VI} (h'^2 - l'^2) + 2h' l' l^{VI}] &= 0,000000 (\overline{11}, 8308353), \\
(m, m')_{10} [h' (q' - q^{VI})^2 - l' (p' (q' - q^{VI}) - q^{VI} (p' - p^{VI}))] &= 0,000000 (\bar{9}, 3051725), \\
(m, m')_{11} [h' (q' - q^{VI})^2 - l' (p' (q' - q^{VI}) - q^{VI} (p' - p^{VI}))] &= 0,000000 (\bar{9}, 3093403), \\
(m, m')_{12} [h' (q' - q^{VI})^2 - l' (p' (q' - q^{VI}) - q^{VI} (p' - p^{VI}))] &= -0,000000 (\overline{12}, 5122002), \\
(m, m')_{13} [-h^{VI} ((q' - q^{VI})^2 - (p' - p^{VI})^2) + 2l^{VI} (p' - p^{VI}) (q' - q^{VI})] &= 0,000000 (\overline{10}, 9364732), \\
(m, m')_{14} [-h^{VI} ((q' - q^{VI})^2 - (p' - p^{VI})^2) + 2l^{VI} (p' - p^{VI}) (q' - q^{VI})] &= -0,000000 (\bar{9}, 3047899), \\
(m, m')_{15} [h' ((q' - q^{VI}) + (p' - p^{VI})^2) - 2l' (q^{VI} p' - q' p^{VI})] &= -0,000000 (\bar{9}, 7939957), \\
(m, m')_{16} [h' ((q' - q^{VI})^2 + (p' - p^{VI})^2) - 2l' (q^{VI} p' - q' p^{VI})] &= 0,000000 (\bar{9}, 7958998), \\
\frac{1}{2} (m, m') h^{VI} (l'^2 + h'^2) &= 0,000000 (\overline{10}, 6527797), \\
\frac{1}{2} [m, m'] h' (l'^2 + h'^2) &= 0,000000 (\overline{11}, 0601161).
\end{aligned}$$

Слѣд: сумма членовъ перваго порядка = 0,000000,

« « « третьяго порядка = 0,000000.

Уранъ и Земля.

$$\begin{aligned}
(m, m'') h^{VI} &= 0,000000, \quad [m, m''] h'' = 0,000000, \\
(m, m'')_1 h^{VI} [l''^2 + h''^2 - (q'' - q^{VI})^2 - (p'' - p^{VI})^2] &= -0,000000 (\overline{13}, 5569405), \\
(m, m'')_4 h^{VI} [l''^2 + h''^2 - (q'' - q^{VI})^2 - (p'' - p^{VI})^2] &= 0,000000 (\overline{10}, 1243823), \\
(m, m'')_2 h^{VI} (l'^2 + h'^2) &= -0,000000 (\overline{10}, 6838834), \\
(m, m'')_3 h^{VI} (l'^2 + h'^2) &= 0,000000 (\overline{10}, 6936743), \\
(m, m'')_5 [2h^{VI} (l' l^{VI} + h' h^{VI}) + h'' (l'^2 + h'^2)] &= -0,000000 (\bar{8}, 5484872), \\
(m, m'')_6 [2h^{VI} (l' l^{VI} + h' h^{VI}) + h'' (l'^2 + h'^2)] &= 0,000000 (\bar{8}, 5462510), \\
(m, m'')_7 h'' (l'^2 + h'^2) &= -0,000000 (\overline{11}, 3830859), \\
(m, m'')_8 h'' (l'^2 + h'^2) &= 0,000000 (\overline{11}, 6340270), \\
(m, m'')_9 [h^{VI} (h''^2 - l''^2) + 2h'' l' l^{VI}] &= -0,000000 (\overline{10}, 2150087), \\
\frac{1}{2} (m, m'')_4 [h^{VI} (h''^2 - l''^2) + 2h'' l' l^{VI}] &= -0,000000 (\overline{11}, 9964316), \\
(m, m'')_{10} [h'' (q'' - q^{VI})^2 - l'' (p'' (q'' - q^{VI}) - q^{VI} (p'' - p^{VI}))] &= 0,000000 (\overline{10}, 6599136), \\
(m, m'')_{11} [h'' (q'' - q^{VI})^2 - l'' (p'' (q'' - q^{VI}) - q^{VI} (p'' - p^{VI}))] &= 0,000000 (\overline{10}, 6599136), \\
(m, m'')_{12} [h'' (q'' - q^{VI})^2 - l'' (p'' (q'' - q^{VI}) - q^{VI} (p'' - p^{VI}))] &= -0,000000 (\overline{12}, 1430367), \\
(m, m'')_{13} [-h^{VI} ((q'' - q^{VI})^2 - (p'' - p^{VI})^2) + 2l^{VI} (p'' - p^{VI}) (q'' - q^{VI})] &= -0,000000 (\overline{10}, 3153867), \\
(m, m'')_{14} [-h^{VI} ((q'' - q^{VI})^2 - (p'' - p^{VI})^2) + 2l^{VI} (p'' - p^{VI}) (q'' - q^{VI})] &= 0,000000 (\overline{10}, 6840299),
\end{aligned}$$

$$(m', m'')_{15} [h'' (q'' - q'^2 + p'' - p'^2) - 2l'' (q'p'' - q''p')] = -0,000000 (\bar{9}, 4072328),$$

$$(m', m'')_{16} [h'' (q'' - q'^2 + p'' - p'^2) - 2l'' (q'p'' - q''p')] = 0,000000 (\bar{9}, 4109317),$$

$$\frac{1}{2} (m', m'') h' (l'^2 + h'^2) = 0,000000 (\bar{10}, 9837252),$$

$$\frac{1}{2} [m', m''] h' (h'^2 + h'^2) = 0,000000 (\bar{10}, 0131734).$$

Слѣд. сумма членовъ перваго порядка = 0,000000,

« « « третьяго порядка = 0,000000.

Уранъ и Марсъ.

$$(m', m''') h' = 0,000000, \quad [m', m'''] h'' = -0,000000,$$

$$(m', m''')_1 h' [l''^2 + h''^2 - (q'' - q'^2) - (p'' - p'^2)] = -0,000000 (\bar{11}, 3420038),$$

$$(m', m''')_2 h' [l''^2 + h''^2 - (q'' - q'^2) - (p'' - p'^2)] = 0,000000 (\bar{9}, 5457897),$$

$$(m', m''')_3 h' (l'^2 + h'^2) = -0,000000 (\bar{10}, 1814781),$$

$$(m', m''')_4 h' (l'^2 + h'^2) = 0,000000 (\bar{10}, 2039707),$$

$$(m', m''')_5 [2h' (l''l' + h''h') + h'' (l'^2 + h'^2)] = 0,000000 (\bar{8}, 4914328),$$

$$(m', m''')_6 [2h' (l''l' + h''h') + h'' (l'^2 + h'^2)] = -0,000000 (\bar{8}, 4861311),$$

$$(m', m''')_7 h'' (l''^2 + h''^2) = 0,000000 (\bar{10}, 9692901),$$

$$(m', m''')_8 h'' (l''^2 + h''^2) = -0,000000 (\bar{9}, 2216384),$$

$$(m', m''')_9 [h' (h''^2 - l''^2) + 2h'' l'' l'] = -0,000000 (\bar{9}, 9779287),$$

$$\frac{1}{2} (m', m''')_4 [h' (h''^2 - l''^2) + 2h'' l'' l'] = 0,000000 (\bar{9}, 7636746),$$

$$(m', m''')_{10} [h'' (q'' - q'^2) - l'' (p'' (q'' - q'^2) - q' (p'' - p'^2))] = -0,000000 (\bar{8}, 0117761),$$

$$(m', m''')_{11} [h'' (q'' - q'^2) - l'' (p'' (q'' - q'^2) - q' (p'' - p'^2))] = -0,000000 (\bar{8}, 0302691),$$

$$(m', m''')_{12} [h'' (q'' - q'^2) - l'' (p'' (q'' - q'^2) - q' (p'' - p'^2))] = 0,000000 (\bar{11}, 8762851),$$

$$(m', m''')_{13} [-h' (q'' - q'^2) - (p'' - p'^2) + 2l' (p'' - p'^2) (q'' - q'^2)] = 0,000000 (\bar{10}, 6156193),$$

$$(m', m''')_{14} [-h' (q'' - q'^2) - (p'' - p'^2) + 2l' (p'' - p'^2) (q'' - q'^2)] = -0,000000 (\bar{10}, 7851408),$$

$$(m', m''')_{15} [h'' (q'' - q'^2 + p'' - p'^2) - 2l'' (q'p'' - q''p')] = -0,000000 (\bar{9}, 3083676),$$

$$(m', m''')_{16} [h'' (q'' - q'^2 + p'' - p'^2) - 2l'' (q'p'' - p'q'')] = 0,000000 (\bar{9}, 3169962),$$

$$\frac{1}{2} (m', m''') h' (l'^2 + h'^2) = 0,000000 (\bar{10}, 4797073),$$

$$\frac{1}{2} [m', m'''] h'' (l'^2 + h'^2) = -0,000000 (\bar{10}, 1082698).$$

Слѣд. сумма членовъ перваго порядка = 0,000000,

« « « третьяго порядка = 0,000000.

Уранъ и Юпитеръ.

$$\begin{aligned}
(m^{VI}m^{IV})h^{VI} &= 0,009438, & [m^{VI}m^{IV}]h^{IV} &= 0,002922, \\
(m^{VI}m^{IV})_1 h^{VI} [l^{IV2} + h^{IV2} - (q^{IV} - q^{VI})^2 - (p^{IV} - p^{VI})^2] &= -0,000003 (\bar{6},4205871), \\
(m^{VI}m^{IV})_4 h^{VI} [l^{IV2} + h^{IV2} - (q^{IV} - q^{VI})^2 - (p^{IV} - p^{VI})^2] &= 0,000039 (\bar{5},5967620), \\
(m^{VI}m^{IV})_2 h^{VI} (l^{VI2} + h^{VI2}) &= -0,000006 (\bar{6},7505035), \\
(m^{VI}m^{IV})_3 h^{VI} (l^{VI2} + h^{VI2}) &= 0,000009 (\bar{6},9685368), \\
(m^{VI}m^{IV})_5 [2h^{VI} (l^{IV}l^{VI} + h^{IV}h^{VI}) + h^{IV} (l^{VI2} + h^{VI2})] &= 0,000038 (\bar{5},5774447), \\
(m^{VI}m^{IV})_6 [2h^{VI} (l^{IV}l^{IV} + h^{IV}h^{IV}) + h^{IV} (l^{VI2} + h^{VI2})] &= -0,000015 (\bar{5},1908857), \\
(m^{VI}m^{IV})_7 h^{IV} (l^{IV2} + h^{IV2}) &= -0,000007 (\bar{6},8312977), \\
(m^{VI}m^{IV})_8 h^{IV} (l^{IV2} + h^{IV2}) &= 0,000013 (\bar{5},1095929), \\
(m^{VI}m^{IV})_9 [h^{VI} (h^{IV2} - l^{IV2}) + 2h^{IV}l^{IV}l^{VI}] &= 0,000075 (\bar{5},8796197), \\
\frac{1}{2} (m^{VI}m^{IV})_4 [h^{VI} (h^{IV2} - l^{IV2}) + 2h^{IV}l^{IV}l^{VI}] &= -0,000056 (\bar{5},7451881), \\
(m^{VI}m^{IV})_{10} [h^{IV} (q^{IV} - q^{VI})^2 - l^{IV} (p^{IV} (q^{IV} - q^{VI}) - q^{VI} (p^{IV} - p^{VI}))] &= 0,000003 (\bar{6},4785215), \\
(m^{VI}m^{IV})_{11} [h^{IV} (q^{IV} - q^{VI})^2 - l^{IV} (p^{IV} (q^{IV} - q^{VI}) - q^{VI} (p^{IV} - p^{VI}))] &= 0,000005 (\bar{6},6945049), \\
(m^{VI}m^{IV})_{12} [h^{IV} (q^{IV} - q^{VI})^2 - l^{IV} (p^{IV} (q^{IV} - q^{VI}) - q^{VI} (p^{IV} - p^{VI}))] &= -0,000000 (\bar{7},5558390), \\
(m^{VI}m^{IV})_{13} [-h^{VI} ((q^{IV} - q^{VI})^2 - (p^{IV} - p^{VI})^2) + 2l^{IV} (p^{IV} - p^{VI}) (q^{IV} - q^{VI})] &= -0,000005 (\bar{6},7434626), \\
(m^{VI}m^{IV})_{14} [-h^{VI} ((q^{IV} - q^{VI})^2 - (p^{IV} - p^{VI})^2) + 2l^{IV} (p^{IV} - p^{VI}) (q^{IV} - q^{VI})] &= 0,000013 (\bar{5},1288293), \\
(m^{VI}m^{IV})_{15} [h^{IV} ((q^{IV} - q^{VI})^2 + (p^{IV} - p^{VI})^2) - 2l^{IV} (q^{VI}p^{IV} - q^{IV}p^{VI})] &= 0,000019 (\bar{5},2904353), \\
(m^{VI}m^{IV})_{16} [h^{IV} ((q^{IV} - q^{VI})^2 + (p^{IV} - p^{VI})^2) - 2l^{IV} (q^{VI}p^{IV} - q^{IV}p^{VI})] &= -0,000025 (\bar{5},3998412), \\
\frac{1}{2} (m^{VI}m^{IV}) h^{VI} (l^{VI2} + h^{VI2}) &= 0,000010 (\bar{5},0108057), \\
\frac{1}{2} [m^{VI}m^{IV}] h^{IV} (l^{VI2} + h^{VI2}) &= 0,000002 (\bar{6},4015803).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = -0,006516,

« « « третьяго порядка = -0,000067.

Уранъ и Сатурнъ.

$$\begin{aligned}
(m^{VI}m^{V})h^{VI} &= 0,014034, & [m^{VI}m^{V}]h^{V} &= 0,046942, \\
(m^{VI}m^{V})_1 h^{VI} [l^{V2} + h^{V2} - (q^{V} - q^{VI})^2 - (p^{V} - p^{VI})^2] &= -0,000018 (\bar{5},2619372), \\
(m^{VI}m^{V})_4 h^{VI} [l^{V2} + h^{V2} - (q^{V} - q^{VI})^2 - (p^{V} - p^{VI})^2] &= 0,000101 (\bar{4},0052940), \\
(m^{VI}m^{V})_2 h^{VI} (l^{VI2} + h^{VI2}) &= -0,000012 (\bar{5},1001577),
\end{aligned}$$

$$\begin{aligned}
(m^{VI}m^V)_3 h^{VI} (l^{VI2} + h^{VI2}) &= 0,000040 (\bar{5},6056806), \\
(m^{VI}m^V)_5 [2h^{VI} (l^{VI}l^{VI} + h^V h^{VI}) + h^V (l^{VI2} + h^{VI2})] &= -0,000231 (\bar{4},3633695), \\
(m^{VI}m^V)_6 [2h^{VI} (l^{VI}l^{VI} + h^V h^{VI}) + h^V (l^{VI2} + h^{VI2})] &= 0,000004 (\bar{6},5940645), \\
(m^{VI}m^V)_7 h^V (l^{VI2} + h^{VI2}) &= -0,000203 (\bar{4},3076629), \\
(m^{VI}m^V)_8 h^V (l^{VI2} + h^{VI2}) &= 0,000445 (\bar{4},6487851), \\
(m^{VI}m^V)_9 [h^{VI} (h^{VI2} - l^{VI2}) + 2h^V l^{VI}l^{VI}] &= -0,000060 (\bar{5},7802081), \\
\frac{1}{2} (m^{VI}m^V)_4 [h^{VI} (h^{VI2} - l^{VI2}) + 2h^V l^{VI}l^{VI}] &= 0,000069 (\bar{5},8406034), \\
(m^{VI}m^V)_{10} [h^V (q^V - q^{VI})^2 - l^V (p^V (q^V - q^{VI}) - q^{VI} (p^V - p^{VI}))] &= 0,000026 (\bar{5},4137746), \\
(m^{VI}m^V)_{11} [h^V (q^V - q^{VI})^2 - l^V (p^V (q^V - q^{VI}) - q^{VI} (p^V - p^{VI}))] &= 0,000144 (\bar{4},1588177), \\
(m^{VI}m^V)_{12} [h^V (q^V - q^{VI})^2 - l^V (p^V (q^V - q^{VI}) - q^{VI} (p^V - p^{VI}))] &= -0,000027 (\bar{5},4334013), \\
(m^{VI}m^V)_{13} [-h^{VI} ((q^V - q^{VI})^2 - (p^V - p^{VI})^2) + 2l^{VI} (p^V - p^{VI}) (q^V - q^{VI})] &= -0,000093 (\bar{5},9701927), \\
(m^{VI}m^V)_{14} [-h^{VI} ((q^V - q^{VI})^2 - (p^V - p^{VI})^2) + 2l^{VI} (p^V - p^{VI}) (q^V - q^{VI})] &= 0,000246 (\bar{4},3909357), \\
(m^{VI}m^V)_{15} [h^V ((q^V - q^{VI})^2 + (p^V - p^{VI})^2) - 2l^V (q^{VI}p^V - q^V p^{VI})] &= -0,000076 (\bar{5},8805912), \\
(m^{VI}m^V)_{16} [h^V ((q^V - q^{VI})^2 + (p^V - p^{VI})^2) - 2l^V (q^{VI}p^V - q^V p^{VI})] &= 0,000229 (\bar{4},3608473), \\
\frac{1}{2} (m^{VI}m^V) h^{VI} (l^{VI2} + h^{VI2}) &= 0,000015 (\bar{5},1831168), \\
\frac{1}{2} [m^{VI}m^V] h^V [l^{VI2} + h^{VI2}] &= 0,000051 (\bar{5},7074958).
\end{aligned}$$

Слѣд. сумма членовъ перваго порядка = 0,032908,

“ “ “ третьяго порядка = -0,000054.

(20). Изъ условій $h = f \sin \omega$, $l = f \cos \omega$, и пр., и изъ формулъ чл. 14 не трудно вывести:

$$\frac{df}{dt} = \frac{h}{f} \cdot \frac{dh}{dt} + \frac{l}{f} \cdot \frac{dl}{dt},$$

$$\frac{d\omega}{dt} = \frac{l}{f^2} \cdot \frac{dh}{dt} - \frac{h}{f^2} \cdot \frac{dl}{dt}.$$

Эти формулы совершенно тождественны съ выраженіями величинъ δf и $\delta \omega$, найденными въ чл. 19 Отд. I, стр. 29. И такъ:

Меркурій.

$$\begin{aligned}
\delta f &= 0,006288 + 0,010431 \mu' + 0,002995 \mu'' - 0,000804 \mu''' - 0,006392 \mu^{IV} \\
&\quad + 0,000056 \mu^V + 0,000002 \mu^{VI}; \\
&= 0,035248 - 0,018237 \mu' - 0,005853 \mu'' - 0,000082 \mu''' - 0,010596 \mu^{IV} \\
&\quad - 0,000469 \mu^V - 0,000011 \mu^{VI};
\end{aligned}$$

слѣд. годично-вѣковое измѣненіе эксцентрицитета, начиная отъ 1800 г., есть:

$$\left. \begin{aligned} \delta f &= 0,2056163 + 0,00000003048 t \\ &\quad - 0,00000017088 t \end{aligned} \right\} = 0,2056163 - 0,00000014040 t.$$

$$\begin{aligned} \delta Q &= 0,012576 + 0,020862 \mu' + 0,005990 \mu'' - 0,001608 \mu''' - 0,012784 \mu^{IV} \\ &\quad + 0,000112 \mu^V + 0,000004 \mu^{VI} \\ &\quad - 0,070496 - 0,036474 \mu' - 0,011706 \mu'' - 0,000164 \mu''' - 0,021192 \mu^{IV} \\ &\quad - 0,000938 \mu^V - 0,000022 \mu^{VI}, \end{aligned}$$

и

$$\begin{aligned} \delta \omega &= 5,417660 + 2,873929 \mu' + 0,853165 \mu'' + 0,028805 \mu''' + 1,583901 \mu^{IV} \\ &\quad + 0,076003 \mu^V + 0,001857 \mu^{VI} \\ &\quad + 0,396461 + 0,395702 \mu' + 0,015078 \mu'' + 0,000183 \mu''' - 0,013160 \mu^{IV} \\ &\quad - 0,001312 \mu^V - 0,000030 \mu^{VI}; \end{aligned}$$

слѣд. годично-вѣковое движеніе перигелія, отъ 1800 года, есть:

$$\omega = 74^\circ 20' 5,8 + 5,814121 t.$$

Венера.

$$\begin{aligned} \delta f &= -0,110950 - 0,030631 \mu - 0,046421 \mu'' - 0,002196 \mu''' - 0,031037 \mu^{IV} \\ &\quad - 0,000672 \mu^V + 0,000007 \mu^{VI} \\ &\quad + 0,005474 + 0,005031 \mu + 0,000300 \mu'' + 0,000062 \mu''' + 0,000080 \mu^{IV} \\ &\quad + 0,000001 \mu^V; \end{aligned}$$

слѣд. отъ 1800 года

$$\left. \begin{aligned} f &= 0,00686182 - 0,0000005379 t \\ &\quad + 0,0000000265 t \end{aligned} \right\} = 0,00686182 - 0,0000005114 t.$$

$$\begin{aligned} \delta Q &= -0,221900 - 0,061262 \mu - 0,092842 \mu'' - 0,004392 \mu''' - 0,062074 \mu^{IV} \\ &\quad - 0,001344 \mu^V + 0,000014 \mu^{VI} \\ &\quad + 0,010948 + 0,010062 \mu + 0,000600 \mu'' + 0,000124 \mu''' + 0,000160 \mu^{IV} \\ &\quad + 0,000002 \mu^V; \end{aligned}$$

$$\begin{aligned} \delta \omega &= -0,735143 - 2,912726 \mu - 5,296424 \mu'' + 0,832494 \mu''' + 6,557924 \mu^{IV} \\ &\quad + 0,079827 \mu^V + 0,003762 \mu^{VI} \\ &\quad + 0,564516 + 0,406152 \mu + 0,160638 \mu'' - 0,026592 \mu''' + 0,025547 \mu^{IV} \\ &\quad - 0,001229 \mu^V; \end{aligned}$$

слѣд. отъ 1800 года

$$\omega = 128^\circ 43' 6,0 - 0,170627 t.$$

Земля.

$$\begin{aligned}\delta f = & -0,086970 - 0,002734 \mu + 0,014425 \mu' - 0,017041 \mu'' - 0,081211 \mu''' \\ & - 0,000431 \mu^{IV} + 0,000022 \mu^{VI} \\ & - 0,000412 + 0,000199 \mu - 0,001257 \mu' + 0,001108 \mu'' - 0,000468 \mu''' \\ & + 0,000006 \mu^{IV};\end{aligned}$$

слѣд. отъ 1800 года

$$\left. \begin{aligned}f = & 0,01679226 - 0,00000042164 t \\ & - 0,00000000199 t\end{aligned} \right\} = 0,01679226 - 0,00000042363 t.$$

$$\begin{aligned}\delta Q = & -0,173940 - 0,005468 \mu + 0,028850 \mu' - 0,034082 \mu'' - 0,162422 \mu''' \\ & - 0,000862 \mu^{IV} - 0,000044 \mu^{VI} \\ & - 0,000824 + 0,000398 \mu - 0,002514 \mu' + 0,002216 \mu'' - 0,000936 \mu''' \\ & + 0,000012 \mu^{IV}.\end{aligned}$$

$$\begin{aligned}\delta \omega = & 11,531469 - 0,280437 \mu + 3,637460 \mu' + 1,066448 \mu'' + 6,917257 \mu''' \\ & + 0,183537 \mu^{IV} + 0,007204 \mu^{VI} \\ & + 0,045180 + 0,018674 \mu + 0,075279 \mu' - 0,048680 \mu'' + 0,002842 \mu''' \\ & - 0,002935 \mu^{IV};\end{aligned}$$

слѣд. отъ 1800 года

$$\omega = 99^\circ 30' 28,6 + 11,576649 t,$$

что совершенно согласно съ наблюденіями Деламбра (Отд. I, стр. 43).

Марсъ.

$$\begin{aligned}\delta f = & 0,186015 + 0,000795 \mu + 0,000742 \mu' + 0,018550 \mu'' + 0,159664 \mu''' \\ & + 0,006282 \mu^{IV} - 0,000018 \mu^{VI} \\ & + 0,000956 - 0,000149 \mu - 0,000394 \mu' - 0,004868 \mu'' + 0,006711 \mu''' \\ & - 0,000340 \mu^{IV} - 0,000004 \mu^{VI};\end{aligned}$$

слѣд. отъ 1800 года

$$\left. \begin{aligned}f = & 0,0932168 + 0,0000009018 t \\ & + 0,0000000046 t\end{aligned} \right\} = 0,0932168 + 0,0000009064 t.$$

$$\begin{aligned}\delta Q = & 0,372030 + 0,001590 \mu + 0,001484 \mu' + 0,037100 \mu'' + 0,319328 \mu''' \\ & + 0,012564 \mu^{IV} - 0,000036 \mu^{VI} \\ & + 0,001912 - 0,000298 \mu - 0,000788 \mu' - 0,009736 \mu'' + 0,013422 \mu''' \\ & - 0,000680 \mu^{IV} - 0,000008 \mu^{VI}.\end{aligned}$$

$$\begin{aligned}\delta\omega = & 15,629293 + 0,014417\mu + 0,487152\mu' + 1,952892\mu'' + 12,495999\mu''' \\ & + 0,663506\mu'' + 0,015327\mu'' \\ & - 0,018858 + 0,001813\mu + 0,003349\mu' + 0,022071\mu'' - 0,040709\mu''' \\ & - 0,005177\mu'' - 0,000205\mu'';\end{aligned}$$

слѣд. отъ 1800 г.

$$\omega = 322^\circ 22' 51,2 + 15,610435 t.$$

Юпитеръ.

$$\begin{aligned}\delta f = & 0,265444 + 0,000003\mu + 0,000005\mu' + 0,000037\mu'' - 0,000065\mu''' \\ & + 0,264803\mu'' + 0,000661\mu'' \\ & - 0,009930 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & - 0,009904\mu'' - 0,000026\mu'';\end{aligned}$$

слѣд. отъ 1800 года

$$\left. \begin{aligned} f = & 0,0481621 + 0,0000012869 t \\ & - 0,0000000481 t \end{aligned} \right\} = 0,0481621 + 0,0000012368 t.$$

$$\begin{aligned}\delta Q = & 0,530888 + 0,000006\mu + 0,000010\mu' + 0,000074\mu'' - 0,000130\mu''' \\ & + 0,529606\mu'' + 0,001322\mu'' \\ & - 0,019860 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & - 0,019808\mu'' - 0,000052\mu'';\end{aligned}$$

$$\begin{aligned}\delta\omega = & 6,358325 + 0,000135\mu + 0,004129\mu' + 0,009013\mu'' + 0,001388\mu''' \\ & + 6,206972\mu'' + 0,136688\mu'' \\ & + 0,094221 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & + 0,096038\mu'' - 0,001817\mu'';\end{aligned}$$

слѣд. отъ 1800 года

$$\omega = 11^\circ 7' 38,0 + 6,452546 t.$$

Сатурнъ.

$$\begin{aligned}\delta f = & -0,550457 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' - 0,000005\mu''' \\ & - 0,561060\mu'' + 0,010608\mu'' \\ & + 0,017519 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & + 0,017580\mu'' - 0,000061\mu'';\end{aligned}$$

слѣд. отъ 1800 года

$$\left. \begin{aligned} f = & 0,0561505 - 0,00000266869 t \\ & + 0,00000008493 t \end{aligned} \right\} = 0,0561505 - 0,00000258376 t.$$

$$\begin{aligned}\delta Q = & -1,100914 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' - 0,000010\mu''' \\ & - 1,122120\mu^{IV} + 0,021216\mu^{VI} \\ & + 0,035038 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & + 0,035160\mu^{IV} - 0,000122\mu^{VI}. \\ \delta\omega = & 16,444396 - 0,000142\mu + 0,000481\mu' + 0,000997\mu'' + 0,000373\mu''' \\ & + 16,094807\mu^{IV} + 0,347880\mu^{VI} \\ & + 0,171901 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & + 0,169371\mu^{IV} + 0,002530\mu^{VI};\end{aligned}$$

слѣд. отъ 1800 года

$$\omega = 89^\circ 8' 20,0 + 16,616297 t.$$

Уранъ.

$$\begin{aligned}\delta f = & -0,052048 + 0,000000\mu - 0,000000\mu' - 0,000000\mu'' + 0,000000\mu''' \\ & - 0,006066\mu^{IV} - 0,045982\mu^V \\ & + 0,000187 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & + 0,000234\mu^{IV} - 0,000047\mu^V\end{aligned}$$

слѣд. отъ 1800 года

$$\left. \begin{aligned}f = & 0,0466108 - 0,00000025233 t \\ & + 0,00000000091 t\end{aligned} \right\} = 0,0466108 - 0,00000025142 t.$$

$$\begin{aligned}\delta Q = & -0,104096 + 0,000000\mu - 0,000000\mu' - 0,000000\mu'' + 0,000000\mu''' \\ & - 0,012132\mu^{IV} - 0,091964\mu^V \\ & + 0,000374 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & + 0,000468\mu^{IV} - 0,000094\mu^V. \\ \delta\omega = & 2,422485 + 0,000000\mu + 0,000042\mu' + 0,000084\mu'' + 0,000026\mu''' \\ & + 1,233602\mu^{IV} + 1,188731\mu^V \\ & - 0,006140 + 0,000000\mu + 0,000000\mu' + 0,000000\mu'' + 0,000000\mu''' \\ & - 0,016110\mu^{IV} + 0,009970\mu^V;\end{aligned}$$

слѣд. отъ 1800 года

$$\omega = 167^\circ 30' 24,0 + 2,416345 t.$$

(21). Въ отдѣленіи I, на стр. 32, формулы, выражающія измѣненія въ наклоненіяхъ орбитъ и въ долготахъ ихъ узловъ относительно подвижной или истинной эклиптики, даютъ

$$\begin{aligned}\delta J_1 = & \left(\frac{dp}{dt} - \frac{dp''}{dt} \right) \sin N + \left(\frac{dq}{dt} - \frac{dq''}{dt} \right) \cos N, \\ \delta N_1 = & \left(\frac{dp}{dt} - \frac{dp''}{dt} \right) \frac{\cos N}{\tan J} - \left(\frac{dq}{dt} - \frac{dq''}{dt} \right) \frac{\sin N}{\tan J};\end{aligned}$$

слѣд. для вычисленія годично-вѣковыхъ возмущеній въ наклоненіяхъ орбитъ и долго-
тахъ ихъ узловъ, надобно предварительно вычислить величины $\frac{dp}{dt}$, $\frac{dp'}{dt}$, и пр., $\frac{dq}{dt}$, $\frac{dq'}{dt}$, и пр.,
изъ коихъ первыя по формулѣ на стр. 27. Находимъ:

Меркурій и Венера.

$$\begin{aligned}(m, m')(q' - q) &= -0''203461 (\bar{1}, 3084809), \\ \frac{1}{2}(m, m')[2(q' - q)(qq' + pp') - q'(q' - q)^2 + (p' - p)^2 - 3q(q'^2 - q^2) - 3p(q'p' - qp)] \\ &= 0''003763 (\bar{3}, 5756328), \\ (m, m')_1(l'^2 + h'^2 + l^2 + h^2)(q' - q) &= 0''007265 (\bar{3}, 8612132), \\ (m, m')_4(l'^2 + h'^2 + l^2 + h^2)(q' - q) &= -0''036364 (\bar{2}, 5606825), \\ (m, m')_2[(l'^2 - h'^2)(q' - q) + 2lh'(p' - p)] &= -0''000003 (\bar{6}, 4674971), \\ \overline{(m, m')} &= \frac{3m'n\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = -1''599898 (0, 2040924), \\ \overline{(m, m')} [(l'^2 - h'^2)(q' - q) + 2lh'(p' - p)] &= -0''000003 (\bar{6}, 5345062), \\ (m, m')_{13}[(l'^2 - h'^2)(q' - q) + 2lh(p' - p)] &= -0''007356 (\bar{3}, 8666580), \\ (m, m')_{14}[(l'^2 - h'^2)(q' - q) + 2lh(p' - p)] &= 0''019687 (\bar{2}, 2941976), \\ 2(m, m')_{15}[(ll' + hh')(q' - q) - (h'l - hl')p'] &= -0''000033 (\bar{5}, 5191180), \\ 2(m, m')_{16}[(ll' + hh')(q' - q) - (h'l - hl')p'] &= 0''000066 (\bar{5}, 8230104), \\ \frac{1}{3}(m, m')_4[(q' - q)^3 + (p' - p)^2(q' - q) - p'(p'q - q'p)] &= -0''025007 (\bar{2}, 3980630), \\ (m, m')_1[(q' - q)^3 + (p' - p)^2(q' - q) - p'(p'q - q'p)] &= 0''184189 (\bar{1}, 2652634), \\ \overline{(m, m')_1} &= \frac{3m'n\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0''318375 (\bar{1}, 5029393), \\ \overline{(m, m')_1} [(q' - q)^3 + (p' - p)^2(q' - q) + 2p'(p'q - q'p)] &= 0''000002 (\bar{6}, 3296618), \\ \frac{1}{6}(m, m')_4[(q' - q)^3 + (p' - p)^2(q' - q) + 2p'(p'q - q'p)] &= -0''000014 (\bar{5}, 1381196), \\ (m, m')_{10}[2hh'(q' - q) + (h'l + hl')p - 2l'hp'] &= -0''000443 (\bar{4}, 6962971), \\ (m, m')_{11}[2hh'(q' - q) + (h'l + hl')p - 2l'hp'] &= -0''003295 (\bar{3}, 5178565), \\ (m, m')_{12}[2hh'(q' - q) + (h'l + hl')p - 2l'hp'] &= 0''000681 (\bar{4}, 8334949), \\ \frac{1}{2}(m, m')(q' - q)[l^2 + h^2 + 3p^2 + 3q^2] &= -0''008904 (\bar{3}, 9495949).\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0''147171$.

Меркурій и Земля.

$$\begin{aligned}
(m, m'') (q'' - q) &= -0,075496 (\bar{2}, 8779230), \\
\frac{1}{2} (m, m'') [2 (qq'' + pp'') (q'' - q) - q'' ((q'' - q)^2 + (p'' - p)^2) - 3q (q''^2 - q^2) - 3p (q'' p'' - qp)] \\
&= 0,001708 (\bar{3}, 2324949), \\
(m, m'')_1 (h''^2 + l''^2 + h^2 + l^2) (q'' - q) &= 0,000999 (\bar{4}, 9996634), \\
(m, m'')_4 (h''^2 + l''^2 + h^2 + l^2) (q'' - q) &= -0,008112 (\bar{3}, 9091591), \\
(m, m'')_2 [(l''^2 - h''^2) (q'' - q) + 2l'' h'' (p'' - p)] &= -0,000008 (\bar{6}, 9376260), \\
\overline{(m, m'')} &= \frac{3m'' n \alpha^3 (1 - 7\alpha^2)}{32 (1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = -0,015828 (\bar{2}, 1994452), \\
\overline{(m, m'')} [(l''^2 - h''^2) (q'' - q) + 2l'' h'' (p'' - p)] &= -0,000000 (\bar{7}, 6889818), \\
(m, m'')_{13} [(l^2 - h^2) (q'' - q) + 2lh (p'' - p)] &= -0,001004 (\bar{3}, 0018373), \\
(m, m'')_{14} [(l^2 - h^2) (q'' - q) + 2lh (p'' - p)] &= 0,002534 (\bar{3}, 4037611), \\
2 (m, m'')_{15} [(l'' + h'') (q'' - q) - (h'' l - h l'') p''] &= 0,000592 (\bar{4}, 7721823), \\
2 (m, m'')_{16} [(l'' + h'') (q'' - q) - (h'' l - h l'') p''] &= -0,001046 (\bar{3}, 0194715), \\
\frac{1}{3} (m, m'')_4 [(q'' - q)^3 + (q'' - q) (p'' - p)^2 - p'' (p'' q - q'' p)] &= -0,000958 (\bar{4}, 9814943), \\
(m, m'')_1 [(q'' - q)^3 + (q'' - q) (p'' - p)^2 - p'' (p'' q - q'' p)] &= 0,000354 (\bar{4}, 5491199), \\
\overline{(m, m'')} &= \frac{3m'' n \alpha^2 (1 - 3\alpha^2 + \alpha^4)}{16 (1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,175214 (\bar{1}, 2435688), \\
\overline{(m, m'')} [(q'' - q)^3 + (q'' - q) (p'' - p)^2 + 2p'' (p'' q - q'' p)] &= 0,000226 (\bar{4}, 3534172), \\
\frac{1}{6} (m, m'')_4 [(q'' - q)^3 + (q'' - q) (p'' - p)^2 + 2p'' (p'' q - q'' p)] &= -0,000479 (\bar{4}, 6804643), \\
(m, m'')_{10} [2hh'' (q'' - q) + (h'' l + h l'') p - 2l'' h p''] &= -0,000591 (\bar{4}, 7720070), \\
(m, m'')_{11} [2hh'' (q'' - q) + (h'' l + h l'') p - 2l'' h p''] &= -0,001641 (\bar{3}, 2153567), \\
(m, m'')_{12} [2hh'' (q'' - q) + (h'' l + h l'') p - 2l'' h p''] &= 0,000215 (\bar{4}, 3330762), \\
\frac{1}{2} (m, m'') (q'' - q) (l^2 + h^2 + 3p^2 + 3q^2) &= -0,003303 (\bar{3}, 5190385).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,007778.

Меркурій и Марсъ

$$\begin{aligned}
(m, m''') (q''' - q) &= -0,001784 (\bar{3}, 2513560), \\
\frac{1}{2} (m, m''') [2 (qq''' + pp''') (q''' - q) - q''' ((q''' - q)^2 + (p''' - p)^2) - 3q (q'''^2 - q^2) - 3p (q''' p''' - qp)] \\
&= 0,000039 (\bar{5}, 5904429),
\end{aligned}$$

$$\begin{aligned}
(m, m''')_1 (h'''^2 + l'''^2 + h^2 + l^2) (q''' - q) &= 0,000009 (\bar{6}, 9445900), \\
(m, m''')_4 (h'''^2 + l'''^2 + h^2 + l^2) (q''' - q) &= -0,000170 (\bar{4}, 2303821), \\
(m, m''')_2 [(l'''^2 - h'''^2) (q''' - q) + 2l'''h''' (p''' - p)] &= -0,000001 (\bar{6}, 0343047), \\
\overline{(m, m''')} &= \frac{3m'''n\alpha^3 (1 - 7\alpha^2)}{32(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,004489 (\bar{3}, 6522238), \\
\overline{(m, m''')} [(l'''^2 - h'''^2) (q''' - q) + 2l'''h''' (p''' - p)] &= 0,000000 (\bar{7}, 8069824), \\
(m, m''')_{13} [(l^2 - h^2) (q''' - q) + 2lh (p''' - p)] &= -0,000021 (\bar{5}, 3191311), \\
(m, m''')_{14} [(l^2 - h^2) (q''' - q) + 2lh (p''' - p)] &= 0,000050 (\bar{5}, 7036728), \\
2(m, m''')_{15} [(hh''' + ll''') (q''' - q) - (h'''l - hl''') p'''] &= -0,000078 (\bar{5}, 8916938), \\
2(m, m''')_{16} [(hh''' + ll''') (q''' - q) - (h'''l - hl''') p'''] &= 0,000097 (\bar{5}, 9865810), \\
\frac{1}{3} (m, m''')_4 [(q''' - q)^3 + (q''' - q) (p''' - p)^2 - p''' (p'''q - q'''p)] &= -0,000009 (\bar{6}, 9621922), \\
(m, m''')_1 [(q'''q)^3 + (q''' - q) (p''' - p)^2 - p''' (p'''q - q'''p)] &= 0,000001 (\bar{6}, 1535214), \\
\overline{(m, m''')} &= \frac{3m'''n\alpha^2 (1 - 3\alpha^2 + \alpha^4)}{16(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,006479 (\bar{3}, 8115327), \\
\overline{(m, m''')} [(q''' - q)^3 + (q''' - q) (p''' - p)^2 + 2p''' (p'''q - q'''p)] &= 0,000003 (\bar{6}, 5237445), \\
\frac{1}{6} (m, m''')_4 [(q''' - q)^3 + (q''' - q) (p''' - p)^2 + 2p''' (p'''q - q'''p)] &= -0,000004 (\bar{6}, 6526608), \\
(m, m''')_{10} [2hh''' (q''' - q) + (h'''l + hl''') p - 2l'''hp'''] &= 0,000099 (\bar{5}, 9980803), \\
(m, m''')_{11} [2hh''' (q''' - q) + (h'''l + hl''') p - 2l'''hp'''] &= 0,000154 (\bar{4}, 1874846), \\
(m, m''')_{12} [2hh''' (q''' - q) + (h'''l + hl''') p - 2l'''hp'''] &= -0,000009 (\bar{6}, 9986036), \\
\frac{1}{2} (m, m''') (q''' - q) (l^2 + h^2 + 3p^2 + 3q^2) &= -0,000156 (\bar{4}, 1935010).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000206.

Меркурій и Юпитеръ.

$$\begin{aligned}
(m, m^{IV}) (q^{IV} - q) &= -0,141964 (\bar{1}, 1521792), \\
\frac{1}{2} (m, m^{IV}) [2(qq^{IV} + pp^{IV}) (q^{IV} - q) - q^{IV} ((q^{IV} - q)^2 + (p^{IV} - p)^2) - 3q(q'^{IV} - q^2) - 3p(q''^{IV} p^{IV} - qp)] &= 0,002893 (\bar{3}, 4613538), \\
(m, m^{IV})_1 [l^{IV^2} + h^{IV^2} + l^2 + h^2] (q^{IV} - q) &= 0,000054 (\bar{5}, 7352034), \\
(m, m^{IV})_4 [l^{IV^2} + h^{IV^2} + l^2 + h^2] (q^{IV} - q) &= -0,009893 (\bar{3}, 9953328), \\
(m, m^{IV})_2 [(l^{IV^2} - h^{IV^2}) (q^{IV} - q) + 2l^{IV}h^{IV} (p^{IV} - p)] &= 0,000099 (\bar{5}, 9988541), \\
\overline{(m, m^{IV})} &= \frac{3m^{IV}n\alpha^3 (1 - 7\alpha^2)}{32(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,639727 (\bar{1}, 8059879),
\end{aligned}$$

$$\begin{aligned}
 \overline{(m, m^{IV})} [(l^{IV^2} - h^{IV^2})(q^{IV} - q) + 2l^{IV}h^{IV}(p^{IV} - p)] &= -0,000159 (\bar{4}, 2004395), \\
 (m, m^{IV})_{13} [(l^2 - h^2)(q^{IV} - q) + 2lh(p^{IV} - p)] &= -0,002135 (\bar{3}, 3294473), \\
 (m, m^{IV})_{14} [(l^2 - h^2)(q^{IV} - q) + 2lh(p^{IV} - p)] &= 0,004998 (\bar{3}, 6987788), \\
 2(m, m^{IV})_{15} [(ll^{IV} + hh^{IV})(q^{IV} - q) - (h^{IV}l - hl^{IV})p^{IV}] &= 0,004209 (\bar{3}, 6242099), \\
 2(m, m^{IV})_{16} [(ll^{IV} + hh^{IV})(q^{IV} - q) - (h^{IV}l - hl^{IV})p^{IV}] &= -0,004283 (\bar{3}, 6317736), \\
 \frac{1}{3}(m, m^{IV})_4 [(q^{IV} - q)^3 + (q^{IV} - q)(p^{IV} - p)^2 - p^{IV}(p^{IV}q - q^{IV}p)] &= -0,000839 (\bar{4}, 9239388), \\
 (m, m^{IV})_1 [(q^{IV} - q)^3 + (q^{IV} - q)(p^{IV} - p)^2 - p^{IV}(p^{IV}q - q^{IV}p)] &= 0,000014 (\bar{5}, 1409307), \\
 \overline{(m, m^{IV})_1} &= \frac{3m^{IV}n\alpha^2(1 - 3\alpha^2 + \alpha^4)}{16(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,403705 (\bar{1}, 6060641), \\
 \overline{(m, m^{IV})_1} [(q^{IV} - q)^3 + (q^{IV} - q)(p^{IV} - p)^2 + 2p^{IV}(p^{IV}q - q^{IV}p)] &= 0,000432 (\bar{4}, 6356913), \\
 \frac{1}{6}(m, m^{IV})_4 [(q^{IV} - q)^3 + (q^{IV} - q)(p^{IV} - p)^2 + 2p^{IV}(p^{IV}q - q^{IV}p)] &= -0,000436 (\bar{4}, 6396988), \\
 (m, m^{IV})_{10} [2hh^{IV}(q^{IV} - q) + (h^{IV}l + hl^{IV})p - 2l^{IV}hp^{IV}] &= 0,001704 (\bar{3}, 2314661), \\
 (m, m^{IV})_{11} [2hh^{IV}(q^{IV} - q) + (h^{IV}l + hl^{IV})p - 2l^{IV}hp^{IV}] &= 0,001769 (\bar{3}, 2476920), \\
 (m, m^{IV})_{12} [2hh^{IV}(q^{IV} - q) + (h^{IV}l + hl^{IV})p - 2l^{IV}hp^{IV}] &= -0,000011 (\bar{5}, 0375267), \\
 \frac{1}{2}(m, m^{IV}) [l^2 + h^2 + 3p^2 + 3q^2](q^{IV} - q) &= -0,006212 (\bar{3}, 7932813).
 \end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,012966.

Меркурій и Сатурнъ.

$$\begin{aligned}
 (m, m^V)(q^V - q) &= -0,007831 (\bar{3}, 8938103), \\
 \frac{1}{2}(m, m^V) [2(qq^V + pp^V)(q^V - q) - q^V((q^V - q)^2 + (p^V - p)^2) - 3q(q^{V^2} - q^2) - 3p(q^Vp^V - qp)] &= 0,000144 (\bar{4}, 1576836), \\
 (m, m^V)_1 [l^{V^2} + h^{V^2} + l^2 + h^2](q^V - q) &= 0,000000 (\bar{7}, 9453368), \\
 (m, m^V)_4 [l^{V^2} + h^{V^2} + l^2 + h^2](q^V - q) &= -0,000090 (\bar{5}, 9557797), \\
 (m, m^V)_2 [(l^{V^2} - h^{V^2})(q^V - q) + 2l^Vh^V(p^V - p)] &= -0,000006 (\bar{6}, 7847618), \\
 \overline{(m, m^V)} &= \frac{3m^Vn\alpha^3(1 - 7\alpha^2)}{32(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,019067 (\bar{2}, 2802940), \\
 \overline{(m, m^V)} [(l^{V^2} - h^{V^2})(q^V - q) + 2l^Vh^V(p^V - p)] &= 0,000006 (\bar{6}, 7797070), \\
 (m, m^V)_{13} [(l^2 - h^2)(q^V - q) + 2lh(p^V - p)] &= -0,000152 (\bar{4}, 1809814), \\
 (m, m^V)_{14} [(l^2 - h^2)(q^V - q) + 2lh(p^V - p)] &= 0,000354 (\bar{4}, 5493621), \\
 2(m, m^V)_{15} [(ll^V + hh^V)(q^V - q) - (h^Vl - lh^V)p^V] &= 0,002380 (\bar{3}, 3767344),
 \end{aligned}$$

*

$$\begin{aligned}
2(m, m^V)_{16} [(ll^V + hh^V)(q^V - q) - (h^V l - hl^V)p] &= -0,002393 (\bar{3}, 3789740), \\
\frac{1}{3}(m, m^V)_4 [(q^V - q)^3 + (q^V - q)(p^V - p)^2 - p^V(p^V q - q^V p)] &= -0,000009 (\bar{6}, 9846534), \\
(m, m^V)_1 [(q^V - q)^3 + (q^V - q)(p^V - p)^2 - p^V(p^V q - q^V p)] &= 0,000000 (\bar{7}, 4513318), \\
\overline{(m, m^V)}_4 &= \frac{3m^V n \alpha^2 (1 - 3\alpha^2 + \alpha^4)}{16(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,019227 (\bar{2}, 2839127), \\
\overline{(m, m^V)}_1 [(q^V - q)^3 + (q^V - q)(p^V - p)^2 + 2p^V(p^V q - q^V p)] &= 0,000017 (\bar{5}, 2327167), \\
\frac{1}{6}(m, m^V)_4 [(q^V - q)^3 + (q^V - q)(p^V - p)^2 + 2p^V(p^V q - q^V p)] &= -0,000003 (\bar{6}, 4619603), \\
(m, m^V)_{10} [2hh^V(q^V - q) + (h^V l + hl^V)p - 2l^V h p^V] &= 0,002544 (\bar{3}, 4055510), \\
(m, m^V)_{11} [2hh^V(q^V - q) + (h^V l + hl^V)p - 2l^V h p^V] &= 0,002572 (\bar{3}, 4103783), \\
(m, m^V)_{12} [2hh^V(q^V - q) + (h^V l + hl^V)p - 2l^V h p^V] &= -0,000005 (\bar{6}, 6768434), \\
\frac{1}{2}(m, m^V)[l^2 + h^2 + 3p^2 + 3q^2](q^V - q) &= -0,000343 (\bar{4}, 5349258).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000422.

Меркурій и Уранъ.

$$\begin{aligned}
(m, m^{VI})(q^{VI} - q) &= -0,000151 (\bar{4}, 1784979), \\
\frac{1}{2}(m, m^{VI})[2(qq^{VI} + pp^{VI})(q^{VI} - q) - q^{VI}((q^{VI} - q)^2 + (p^{VI} - p)^2) - 3q(q^{VI2} - q^2) - 3p(q^{VI}p^{VI} - qp)] &= 0,000003 (\bar{6}, 5178288), \\
(m, m^{VI})_1 (l^{VI2} + h^{VI2} + l^2 + h^2)(q^{VI} - q) &= 0,000000 (\bar{9}, 6126379), \\
(m, m^{VI})_4 (l^{VI2} + h^{VI2} + l^2 + h^2)(q^{VI} - q) &= -0,000010 (\bar{5}, 0030583), \\
(m, m^{VI})_2 [(l^{VI2} - h^{VI2})(q^{VI} - q) + 2l^{VI}h^{VI}(p^{VI} - p)] &= 0,000000 (\bar{8}, 6255766), \\
\overline{(m, m^{VI})} &= \frac{3m^{VI} n \alpha^3 (1 - 7\alpha^2)}{32(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,000462 (\bar{4}, 6648223), \\
\overline{(m, m^{VI})} [(l^{VI2} - h^{VI2})(q^{VI} - q) + 2l^{VI}h^{VI}(p^{VI} - p)] &= -0,000000 (\bar{8}, 6248171), \\
(m, m^{VI})_{13} [(l^2 - h^2)(q^{VI} - q) + 2lh(p^{VI} - p)] &= -0,000002 (\bar{6}, 2517244), \\
(m, m^{VI})_{14} [(l^2 - h^2)(q^{VI} - q) + 2lh(p^{VI} - p)] &= 0,000004 (\bar{6}, 6195536), \\
2(m, m^{VI})_{15} [(ll^{VI} + hh^{VI})(q^{VI} - q) - (h^{VI}l - hl^{VI})p^{VI}] &= 0,000007 (\bar{6}, 8686845), \\
2(m, m^{VI})_{16} [(ll^{VI} + hh^{VI})(q^{VI} - q) - (h^{VI}l - hl^{VI})p^{VI}] &= -0,000007 (\bar{6}, 8692340), \\
\frac{1}{3}(m, m^{VI})_4 [(q^{VI} - q)^3 + (q^{VI} - q)(p^{VI} - p)^2 - p^{VI}(p^{VI}q - q^{VI}p)] &= -0,000000 (\bar{7}, 9724489), \\
(m, m^{VI})_1 [(q^{VI} - q)^3 + (q^{VI} - q)(p^{VI} - p)^2 - p^{VI}(p^{VI}q - q^{VI}p)] &= 0,000000 (\bar{9}, 0591498), \\
\overline{(m, m^{VI})}_4 &= \frac{3m^{VI} n \alpha^2 (1 - 3\alpha^2 + \alpha^4)}{16(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,000463 (\bar{4}, 6654648), \\
\overline{(m, m^{VI})}_1 [(q^{VI} - q)^3 + (q^{VI} - q)(p^{VI} - p)^2 + 2p^{VI}(p^{VI}q - pq^{VI})] &= 0,000000 (\bar{7}, 6579299),
\end{aligned}$$

$$\frac{1}{6} (m, m^{VI})_4 [(q^{VI} - q)^3 + (q^{VI} - q)(p^{VI} - p)^2 + 2p^{VI}(p^{VI}q - q^{VI}p)] = -0,000000(\bar{7},6587035),$$

$$(m, m^{VI})_{10} [2hh^{VI}(q^{VI} - q) + (h^{VI}l + hl^{VI})p - 2l^{VI}hp^{VI}] = -0,000051(\bar{5},7096631),$$

$$(m, m^{VI})_{11} [2hh^{VI}(q^{VI} - q) + (h^{VI}l + hl^{VI})p - 2l^{VI}p^{VI}h] = -0,000051(\bar{5},7108569),$$

$$(m, m^{VI})_{12} [2hh^{VI}(q^{VI} - q) + (h^{VI}l + hl^{VI})p - 2l^{VI}hp^{VI}] = 0,000000(\bar{8},3715005),$$

$$\frac{1}{2} (m, m^{VI})(q^{VI} - q)(l^2 + h^2 + 3p^2 + 3q^2) = -0,000007(\bar{6},8196134),$$

Слѣд. сумма членовъ третьяго порядка = 0,000012.

Венера и Меркурій.

$$(m', m)(q - q') = 0,019937(\bar{2},2996624),$$

$$\frac{1}{2} (m', m) [2(qq' + pp')(q - q') - q((q - q')^2 + (p - p')^2) - 3q'(q^2 - q'^2) - 3q'(qp - q'p')] = 0,000152(\bar{4},1823308),$$

$$(m', m)_1 [l^2 + h^2 + l'^2 + h'^2](q - q') = -0,000712(\bar{4},8524050),$$

$$(m', m)_4 [l^2 + h^2 + l'^2 + h'^2](q - q') = 0,003563(\bar{3},5518743),$$

$$(m', m)_2 [(l^2 - h^2)(q - q') + 2lh(p - p')] = 0,000247(\bar{4},3934838),$$

$$\overline{(m', m)} = -0,156774(\bar{1},1952739),$$

$$\overline{(m', m)} [(l^2 - h^2)(q - q') + 2lh(p - p')] = 0,000289(\bar{4},4604928),$$

$$(m', m)_{13} [(l'^2 - h'^2)(q - q') + 2l'h'(p - p')] = 0,000000(\bar{7},9230342),$$

$$(m', m)_{14} [(l'^2 - h'^2)(q - q') + 2l'h'(p - p')] = -0,000002(\bar{6},3505740),$$

$$2(m', m)_{15} [(ll' + hh')(q - q') - (hl' - h'l)p] = -0,000063(\bar{5},7975034),$$

$$2(m', m)_{16} [(ll' + hh')(q - q') - (hl' - h'l)p] = 0,000126(\bar{4},1013958),$$

$$\frac{1}{3} (m', m)_4 [(q - q')^3 + (q - q')(p - p')^2 - p(pq' - qp')] = 0,000289(\bar{4},4607903),$$

$$(m', m)_1 [(q - q')^3 + (q - q')(p - p')^2 - p(pq' - qp')] = -0,000173(\bar{4},2384423),$$

$$\overline{(m', m)}_1 = -0,031197(\bar{2},4941208),$$

$$\overline{(m', m)}_1 [(q - q')^3 + (q' - q)(p - p')^2 + 2p(pq' - qp')] = 0,000007(\bar{6},8203132),$$

$$\frac{1}{6} (m', m)_4 [(q - q')^3 + (q' - q)(p - p')^2 + 2p(pq' - qp')] = -0,000042(\bar{5},6287710),$$

$$(m', m)_{10} [2hh'(q - q') + (hl' + h'l)p' - 2lh'p] = 0,000012(\bar{5},0809842),$$

$$(m', m)_{11} [2hh'(q - q') + (hl' + h'l)p' - 2lh'p] = 0,000090(\bar{5},9525430),$$

$$(m', m)_{12} [2hh'(q - q') + (hl' + h'l)p' - 2lh'p] = -0,000018(\bar{5},2681820),$$

$$\frac{1}{2} (m', m)(q - q')[l'^2 + h'^2 + 3p'^2 + 3q'^2] = 0,000000(\bar{7},0231715).$$

Слѣд. сумма членовъ третьяго порядка = -0,004075.

Венера и Земля.

$$\begin{aligned}
(m', m'')(q'' - q') &= -0,105285 (\bar{1}, 0223675), \\
\frac{1}{2}(m', m'')[2(q'q'' + p'p'')(q'' - q') - q''((q'' - q')^2 + (p'' - p')^2) - 3q'(q''^2 - q'^2) - 3p''(q''p'' - q'p')] \\
&= 0,000554 (\bar{4}, 7439086), \\
(m', m'')_1 [l''^2 + h''^2 + l'^2 + h'^2] (q'' - q') &= 0,000120 (\bar{4}, 0779389), \\
(m', m'')_4 [l''^2 + h''^2 + l'^2 + h'^2] (q'' - q') &= -0,000426 (\bar{4}, 6291209), \\
(m', m'')_2 [(l''^2 - h''^2)(q'' - q') + 2l'h''(p'' - p')] &= -0,000091 (\bar{5}, 9590353), \\
\overline{(m', m'')} &= \frac{3m''n'\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = -24,343967 (1, 3863914), \\
\overline{(m', m'')} [(l''^2 - h''^2)(q'' - q') + 2l'h''(p'' - p')] &= -0,000228 (\bar{4}, 3581310), \\
(m', m'')_{13} [(l'^2 - h'^2)(q'' - q') + 2l'h'(p'' - p')] &= 0,000057 (\bar{5}, 7590311), \\
(m', m'')_{14} [(l'^2 - h'^2)(q'' - q') + 2l'h'(p'' - p')] &= 0,000172 (\bar{4}, 2358939), \\
2(m', m'')_{15} [(l'l'' + h'h'')(q'' - q') - (h''l' - h'l'')p''] &= 0,000016 (\bar{5}, 2192484), \\
2(m', m'')_{16} [(l'l'' + h'h'')(q'' - q') - (h''l' - h'l'')p''] &= -0,000145 (\bar{4}, 1604356), \\
\frac{1}{3}(m', m'')_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 - p''(p''q' - q''p')] &= -0,001514 (\bar{3}, 1800201), \\
(m', m'')_1 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 - p''(p''q' - q''p')] &= 0,001276 (\bar{3}, 1059594), \\
\overline{(m', m'')}_1 &= \frac{3m''n'\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = 2,138919 (0, 3301945), \\
\overline{(m', m'')}_1 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 + 2p''(p''q' - q''p')] &= -0,000116 (\bar{4}, 0653179), \\
\frac{1}{6}(m', m'')_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 + 2p''(p''q' - q''p')] &= -0,000757 (\bar{4}, 8789901), \\
(m', m'')_{10} [2h'h''(q'' - q') + (h''l' + h'l'')p' - 2l'h'p''] &= -0,000012 (\bar{5}, 0694101), \\
(m', m'')_{11} [2h'h''(q'' - q') + (h''l' + h'l'')p' - 2l'h'p''] &= -0,000666 (\bar{4}, 8233174), \\
(m', m'')_{12} [2h'h''(q'' - q') + (h''l' + h'l'')p' - 2l'h'p''] &= 0,000189 (\bar{4}, 2768887), \\
\frac{1}{2}(m', m'')(q'' - q')(l'^2 + h'^2 + 3p'^2 + 3q'^2) &= -0,000557 (\bar{4}, 7458807).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,003658.

Венера и Марсъ.

$$\begin{aligned}
(m', m''')(q''' - q') &= 0,000628 (\bar{4}, 7983346), \\
\frac{1}{2}(m', m''')[2(q'q''' + p'p''')(q''' - q') - q'''((q''' - q')^2 + (p''' - p')^2) - 3q'(q'''^2 - q'^2) - 3p'(q'''p''' - q'p')] \\
&= 0,000002 (\bar{6}, 3935481),
\end{aligned}$$

$$\begin{aligned}
(m', m''')_1 [l''^2 + h''^2 + l'^2 + h'^2] (q''' - q') &= -0,000003 (\bar{6}, 4904427), \\
(m', m''')_4 [l''^2 + h''^2 + l'^2 + h'^2] (q''' - q') &= 0,000018 (\bar{5}, 2627680), \\
(m', m''')_2 [(l''^2 - h''^2) (q''' - q') + 2l''h'' (p''' - p')] &= -0,000010 (\bar{5}, 0226500), \\
\overline{(m', m''')} &= \frac{3m''n'\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = -0,026730 (\bar{2}, 4270118), \\
\overline{(m', m''')} [(l''^2 - h''^2) (q''' - q') + 2l''h'' (p''' - p')] &= 0,000007 (\bar{6}, 8540920), \\
(m', m''')_{13} [(l'^2 - h'^2) (q''' - q') + 2l'h' (p''' - p')] &= -0,000000 (\bar{7}, 2439263), \\
(m', m''')_{14} [(l'^2 - h'^2) (q''' - q') + 2h'l' (p''' - p')] &= 0,000000 (\bar{7}, 9842303), \\
2(m', m''')_{15} [(l'l'' + h'h'') (q''' - q') - (h''l' - h'l'') p'''] &= -0,000000 (\bar{7}, 6851325), \\
2(m', m''')_{16} [(l'l'' + h'h'') (q''' - q') - (h''l' - h'l'') p'''] &= 0,000001 (\bar{6}, 1051938), \\
\frac{1}{3}(m', m''')_4 [(q''' - q')^3 + (q''' - q') (p''' - p')^2 - p''' (p''' q' - q''' p')] &= 0,000003 (\bar{6}, 4987712), \\
(m', m''')_1 [(q''' - q')^3 + (q''' - q') (p''' - p')^2 - p''' (p''' q' - q''' p')] &= -0,000001 (\bar{6}, 2035672), \\
\overline{(m', m''')} &= \frac{3m''n'\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,015928 (\bar{2}, 2021745), \\
\overline{(m', m''')} [(q''' - q')^3 + (q''' - q') (p''' - p')^2 + 2p''' (p''' q' - q''' p')] &= 0,000000 (\bar{7}, 7411251), \\
\frac{1}{6}(m', m''')_4 [(q''' - q')^3 + (q''' - q') (p''' - p')^2 + 2p''' (p''' q' - q''' p')] &= -0,000002 (\bar{6}, 2926470), \\
(m', m''')_{10} [2h'h'' (q''' - q') + (h''l' + h'l'') p' - 2l''h'p'''] &= 0,000001 (\bar{6}, 0194541), \\
(m', m''')_{11} [2h'h'' (q''' - q') + (h''l' + h'l'') p' - 2l''h'p'''] &= 0,000005 (\bar{6}, 6951652), \\
(m', m''')_{12} [2h'h'' (q''' - q') + (h''l' + h'l'') p' - 2l''h'p'''] &= -0,000000 (\bar{7}, 9425460), \\
\frac{1}{2}(m', m''') (q''' - q') (l'^2 + h'^2 + 3q'^2 + 3p'^2) &= 0,000003 (\bar{6}, 5218478).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000006$.

Венера и Юпитеръ.

$$\begin{aligned}
(m', m^{IV}) (q^{IV} - q') &= -0,079015 (\bar{2}, 8977130), \\
\frac{1}{2}(m', m^{IV}) [2(q'q^{IV} + p'p^{IV}) (q^{IV} - q') - q^{IV} ((q^{IV} - q')^2 + (p^{IV} - p')^2) - 3q' (q^{IV2} - q'^2) - 3p' (q^{IV} p^{IV} - q' p')] &= 0,000282 (\bar{4}, 4501628), \\
(m', m^{IV})_1 [l^{IV2} + h^{IV2} + l'^2 + h'^2] (q^{IV} - q') &= 0,000006 (\bar{6}, 7509729), \\
(m', m^{IV})_4 [l^{IV2} + h^{IV2} + l'^2 + h'^2] (q^{IV} - q') &= -0,000299 (\bar{4}, 4762345), \\
(m', m^{IV})_2 [(l^{IV2} - h^{IV2}) (q^{IV} - q') + 2l^{IV}h^{IV} (p^{IV} - p')] &= 0,000076 (\bar{5}, 8793026), \\
\overline{(m', m^{IV})} &= \frac{3m^{IV}n'\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,949667 (\bar{1}, 9775714),
\end{aligned}$$

$$\begin{aligned}
\overline{(m', m^{IV})} [(l^{IV^2} - h^{IV^2})(q^{IV} - q') + 2l^{IV}h^{IV}(p^{IV} - p')] &= -0,000067 (\bar{5}, 8272978), \\
(m', m^{IV})_{13} [(l'^2 - h'^2)(q^{IV} - q') + 2l'h'(p^{IV} - p')] &= -0,000006 (\bar{6}, 7598985), \\
(m', m^{IV})_{14} [(l'^2 - h'^2)(q^{IV} - q') + 2l'h'(p^{IV} - p')] &= 0,000013 (\bar{5}, 1325765), \\
2(m', m^{IV})_{15} [(l'l^{IV} + h'h^{IV})(q^{IV} - q') - (h^{IV}l' - h'l^{IV})p^{IV}] &= -0,000289 (\bar{4}, 4603679), \\
2(m', m^{IV})_{16} [(l'l^{IV} + h'h^{IV})(q^{IV} - q') - (h^{IV}l' - h'l^{IV})p^{IV}] &= 0,000307 (\bar{4}, 4872308), \\
\frac{1}{3}(m', m^{IV})_4 [(q^{IV} - q')^3 + (q^{IV} - q')(p^{IV} - p')^2 - p^{IV}(p^{IV}q' - q^{IV}p')] &= -0,000093 (\bar{5}, 9675743), \\
(m', m^{IV})_1 [(q^{IV} - q')^3 + (q^{IV} - q')(p^{IV} - p')^2 - p^{IV}(p^{IV}q' - q^{IV}p')] &= 0,000005 (\bar{6}, 7194341), \\
\overline{(m', m^{IV})}_1 &= \frac{3m^{IV}n'\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -1,027512 (\bar{0}, 0117870), \\
\overline{(m', m^{IV})}_1 [(q^{IV} - q')^3 + (q^{IV} - q')(p^{IV} - p')^2 + 2p^{IV}(p^{IV}q' - q^{IV}p')] &= 0,000004 (\bar{6}, 6591700), \\
\frac{1}{6}(m', m^{IV})_4 [(q^{IV} - q')^3 + (q^{IV} - q')(p^{IV} - p')^2 + 2p^{IV}(p^{IV}q' - q^{IV}p')] &= -0,000005 (\bar{6}, 6964028), \\
(m', m^{IV})_{10} [2h'h^{IV}(q^{IV} - q') + (h^{IV}l' + h'l^{IV})p' - 2l^{IV}h'p^{IV}] &= -0,000022 (\bar{5}, 3520309), \\
(m', m^{IV})_{11} [2h'h^{IV}(q^{IV} - q') + (h^{IV}l' + h'l^{IV})p' - 2l^{IV}h'p^{IV}] &= -0,000026 (\bar{5}, 4086811), \\
(m', m^{IV})_{12} [2h'h^{IV}(q^{IV} - q') + (h^{IV}l' + h'l^{IV})p' - 2l^{IV}h'p^{IV}] &= 0,000000 (\bar{7}, 7305507), \\
\frac{1}{2}(m', m^{IV})(q^{IV} - q')[l'^2 + h'^2 + 3p'^2 + 3q'^2] &= -0,000418 (\bar{4}, 6212262).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000094.

Венера и Сатурнъ.

$$\begin{aligned}
(m', m^V)(q^V - q') &= -0,006294 (\bar{3}, 7989478), \\
\frac{1}{2}(m', m^V)[2(q'q^V + p'p^V)(q^V - q') - q^V((q^V - q')^2 + (p^V - p')^2) - 3q'(q'^2 - q'^2) - 3p'(p^Vq^V - q'p')] &= 0,000016 (\bar{5}, 2143516), \\
(m', m^V)_1 [l'^2 + h'^2 + l'^2 + h'^2](q^V - q') &= 0,000000 (\bar{7}, 2448678), \\
(m', m^V)_4 [l'^2 + h'^2 + l'^2 + h'^2](q^V - q') &= -0,000031 (\bar{5}, 4886112), \\
(m', m^V)_2 [(l'^2 - h'^2)(q^V - q') + 2l'h^V(p^V - p')] &= -0,000005 (\bar{6}, 6909779), \\
\overline{(m', m^V)} &= \frac{3m^Vn'\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,048235 (\bar{2}, 6833624), \\
\overline{(m', m^V)} [(l'^2 - h'^2)(q^V - q') + 2l'h^V(p^V - p')] &= 0,000005 (\bar{6}, 6765340), \\
(m', m^V)_{13} [(l'^2 - h'^2)(q^V - q') + 2l'h^V(p^V - p')] &= -0,000000 (\bar{7}, 2139874), \\
(m', m^V)_{14} [(l'^2 - h'^2)(q^V - q') + 2l'h^V(p^V - p')] &= 0,000000 (\bar{7}, 5833724), \\
2(m', m^V)_{15} [(l'l^V + h'h^V)(q^V - q') - (h^Vl' - h'l^V)p^V] &= 0,000001 (\bar{6}, 1083176), \\
2(m', m^V)_{16} [(l'l^V + h'h^V)(q^V - p') - (h^Vl' - h'l^V)p^V] &= -0,000001 (\bar{6}, 1161236),
\end{aligned}$$

$$\frac{1}{3} (m', m'')_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 - p''(p''q' - q''p')] = -0,000010 (\bar{5}, 0207965),$$

$$(m', m'')_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 - p''(p''q' - q''p')] = 0,000000 (\bar{7}, 2541744),$$

$$\overline{(m', m'')} = \frac{3m''n'\alpha^2(1 - 3\alpha^2 + \alpha^4)}{16(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,492862 (\bar{1}, 6927257),$$

$$\overline{(m', m'')}_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 + 2p''(p''q' - q''p')] = -0,000042 (\bar{5}, 6206604),$$

$$\frac{1}{6} (m', m'')_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 + 2p''(p''q' - q''p')] = 0,000004 (\bar{6}, 6316294),$$

$$(m', m'')_{10} [2h'h''(q'' - q') + (h''l' + h'l'')p' - 2l'h'p''] = -0,000057 (\bar{5}, 7546767),$$

$$(m', m'')_{11} [2h'h''(q'' - q') + (h''l' + h'l'')p - 2l'h'p''] = -0,000059 (\bar{5}, 7715318),$$

$$(m', m'')_{12} [2h'h''(q'' - q') + (h''l' + h'l'')p' - 2l'h'p''] = -0,000000 (\bar{7}, 5777082),$$

$$\frac{1}{2} (m', m'')(q'' - q')(l'^2 + h'^2 + 3p'^2 + 3q'^2) = -0,000033 (\bar{5}, 5224610).$$

Слѣд. сумма членовъ третьяго порядка = -0,000036.

Венера и Уранъ.

$$(m', m^{VI})(q^{VI} - q') = -0,000055 (\bar{5}, 7372988),$$

$$\begin{aligned} \frac{1}{2} (m', m^{VI}) [2(q'q^{VI} + p'p^{VI})(q^{VI} - q') - q^{VI}((q^{VI} - q')^2 + (p^{VI} - p')^2) - 3q'(q^{VI2} - q'^2) - 3p'(q^{VI}p^{VI} - q'p')] \\ = 0,000000 (\bar{7}, 4775245), \end{aligned}$$

$$(m', m^{VI})_1 [l^{VI2} + h^{VI2} + l'^2 + h'^2](q^{VI} - q') = 0,000000 (\bar{10}, 4137553),$$

$$(m', m^{VI})_4 [l^{VI2} + h^{VI2} + l'^2 + h'^2](q^{VI} - q') = -0,000000 (\bar{7}, 2617401),$$

$$(m', m^{VI})_2 [(l^{VI2} - h^{VI2})(q^{VI} - q') + 2l^{VI}h^{VI}(p^{VI} - p')] = -0,000000 (\bar{8}, 3284372),$$

$$\overline{(m', m^{VI})} = \frac{3m^{VI}n'\alpha^3(1 - 7\alpha^2)}{32(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,001177 (\bar{3}, 0708664),$$

$$\overline{(m', m^{VI})} [(l^{VI2} - h^{VI2})(q^{VI} - q') + 2l^{VI}h^{VI}(p^{VI} - p')] = 0,000000 (\bar{8}, 3249309),$$

$$(m', m^{VI})_{13} [(l'^2 - h'^2)(q^{VI} - q') + 2l'h'(p^{VI} - p')] = -0,000000 (\bar{9}, 884342),$$

$$(m', m^{VI})_{14} [(l'^2 - h'^2)(q^{VI} - q') + 2l'h'(p^{VI} - p')] = 0,000000 (\bar{8}, 2526590),$$

$$2(m', m^{VI})_{15} [(l'l^{VI} + h'h^{VI})(q^{VI} - q') - (h^{VI}l' - h'l^{VI})p^{VI}] = 0,000000 (\bar{7}, 8367297),$$

$$2(m', m^{VI})_{16} [(l'l^{VI} + h'h^{VI})(q^{VI} - q') - (h^{VI}l' - h'l^{VI})p^{VI}] = -0,000000 (\bar{7}, 8386338),$$

$$\frac{1}{3} (m', m^{VI})_4 [(q^{VI} - q')^3 + (q^{VI} - q')(p^{VI} - p')^2 - p^{VI}(p^{VI}q' - q^{VI}p')] = -0,000000 (\bar{8}, 7528867),$$

$$(m', m^{VI})_4 [(q^{VI} - q')^3 + (q^{VI} - q')(p^{VI} - p')^2 - p^{VI}(p^{VI}q' - q^{VI}p')] = 0,000000 (\bar{10}, 3820232),$$

$$\overline{(m', m^{VI})} = \frac{3m^{VI}n'\alpha^2(1 - 3\alpha^2 + \alpha^4)}{16(1 - \alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,001138 (\bar{3}, 0561391),$$

$$\overline{(m', m^{VI})}_4 [(q^{VI} - q')^3 + (q^{VI} - q')(p^{VI} - p')^2 + 2p^{VI}(p^{VI}q' - q^{VI}p')] = 0,000000 (\bar{8}, 4504156),$$

$$\begin{aligned}
\frac{1}{6}(m', m'^I)_4 [(q'^I - q')^3 + (q'^I - q')(p'^I - p')^2 + 2p'^I(p'^I q' - q'^I p')] &= -0,000000(\bar{8},4701040), \\
(m', m'^I)_{10} [2h'h'^I(q'^I - q') + (h'^I l' + h' l'^I)p' - 2l'^I h' p'^I] &= -0,000000(\bar{7},9771218), \\
(m', m'^I)_{11} [2h'h'^I(q'^I - q') + (h'^I l' + h' l'^I)p' - 2l'^I h' p'^I] &= -0,000001(\bar{6},0172898), \\
(m', m'^I)_{12} [2h'h'^I(q'^I - q') + (h'^I l' + h' l'^I)p' - 2l'^I h' p'^I] &= 0,000000(\bar{9},1841495), \\
\frac{1}{2}(m', m'^I)(q'^I - q')[l'^2 + h'^2 + 3p'^2 + 3q'^2] &= -0,000000(\bar{7},4608120).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000001.

Земля и Меркурій.

$$\begin{aligned}
(m'', m)(q - q'') &= 0,00005626(\bar{3},7501997), \\
\frac{1}{2}(m'', m) [2(q''q + p''p)(q - q'') - q((q - q'')^2 + (p - p'')^2) - 3q''(q^2 - q''^2) - 3p''(qp - q''p'')] &= -0,000042(\bar{5},6276603), \\
(m'', m)_1 [(l^2 + h^2 + l'^2 + h'^2)](q - q'') &= -0,000074(\bar{5},8719402), \\
(m'', m)_4 [l^2 + h^2 + l'^2 + h'^2](q - q'') &= 0,000604(\bar{4},7814359), \\
(m'', m)_2 [(l^2 - h^2)(q - q'') + 2lh(p - p'')] &= 0,000024(\bar{5},3784504), \\
\overline{(m'', m)} &= -0,001179(\bar{3},0717219), \\
\overline{(m'', m)} [(l^2 - h^2)(q - q'') + 2lh(p - p'')] &= 0,000001(\bar{6},1298061), \\
(m, m'')_{13} [(l'^2 - h'^2)(q - q'') + 2l'h''(p - p'')] &= 0,000002(\bar{6},3055665), \\
(m'', m)_{14} [(l'^2 - h'^2)(q - q'') + 2l'h''(p - p'')] &= -0,000005(\bar{6},7074903), \\
2(m'', m)_{15} [(l'l + h'h)(q - q'') - (hl'' - h''l)p] &= -0,000065(\bar{5},8164304), \\
2(m'', m)_{16} [(l'l + h'h)(q - q'') - (hl'' - h''l)p] &= 0,000116(\bar{4},0637296), \\
\frac{1}{3}(m'', m)_4 [(q - q'')^3 + (q - q'')(p - p'')^2 - p(pq'' - qp'')] &= 0,000071(\bar{5},8538036), \\
(m'', m)_1 [(q - q'')^3 + (q - q'')(p - p'')^2 - p(pq'' - qp'')] &= -0,000026(\bar{5},4214292), \\
\overline{(m'', m)}_1 &= -0,013057(\bar{2},1158456), \\
\overline{(m, m'')}_1 [(q - q'')^3 + (q - q'')(p - p'')^2 + 2p(pq'' - qp'')] &= -0,000017(\bar{5},2257265), \\
\frac{1}{6}(m'', m)_4 [(q - q'')^3 + (q - q'')(p - p'')^2 + 2p(pq'' - qp'')] &= 0,000036(\bar{5},5527736), \\
(m'', m)_{10} [2h''h(q - q'') + (hl'' + h''l)p'' - 2lh''p] &= 0,000001(\bar{6},0904745), \\
(m'', m)_{11} [2h''h(q - q'') + (hl'' + h''l)p'' - 2lh''p] &= 0,000003(\bar{6},5338242), \\
(m'', m)_{12} [2h''h(q - q'') + (hl'' + h''l)p'' - 2lh''p] &= 0,000000(\bar{7},6515437), \\
\frac{1}{2}(m'', m)(q - q'')(l'^2 + h'^2 + 3p'^2 + 3q'^2) &= 0,000000(\bar{7},8994188).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,000583.

Земля и Венера.

$$\begin{aligned}
 (m'', m') (q' - q'') &= 0,080068 (\bar{2}, 9034631), \\
 \frac{1}{2} (m'', m') [2(q'' q' + p'' p') (q' - q'') - q' (q' - q'')^2 + (p' - p'')^2 - 3q'' (q'^2 - q''^2) - 3p'' (q' p' - q'' p'')] \\
 &= -0,000141 (\bar{4}, 1479134), \\
 (m'', m')_1 [l'^2 + h'^2 + l''^2 + h''^2] (q' - q'') &= -0,000091 (\bar{5}, 9590345), \\
 (m'', m')_4 [l'^2 + h'^2 + l''^2 + h''^2] (q' - q'') &= 0,000324 (\bar{4}, 5102165), \\
 (m'', m')_2 [(l'^2 - h'^2) (q' - q'') + 2l'h' (p' - p'')] &= 0,000021 (\bar{5}, 3139955), \\
 \overline{(m', m'')} &= -18,513436 (1, 2674870), \\
 \overline{(m'', m')} [(l'^2 - h'^2) (q' - q'') + 2l'h' (p' - p'')] &= 0,000052 (\bar{5}, 7130912), \\
 (m'', m')_{13} [(l''^2 - h''^2) (q' - q'') + 2l''h'' (p' - p'')] &= 0,000147 (\bar{4}, 1662621), \\
 (m'', m')_{14} [(l''^2 - h''^2) (q' - q'') + 2l''h'' (p' - p'')] &= -0,000440 (\bar{4}, 6431249), \\
 2 (m'', m')_{15} [(l'l'' + h'h'') (q' - q'') - (h'l'' - h''l') p'] &= 0,000013 (\bar{5}, 1104632), \\
 2 (m'', m')_{16} [(l'l'' + h'h'') (q' - q'') - (h'l'' - h''l') p'] &= -0,000113 (\bar{4}, 0516504), \\
 \frac{1}{3} (m'', m')_4 [(q' - q'')^3 + (q' - q'') (p' - p'')^2 - p' (p' q'' - q' p'')] &= 0,001151 (\bar{3}, 0611157), \\
 (m'', m')_1 [(q' - q'')^3 + (q' - q'') (p' - p'')^2 - p' (p' q'' - q' p'')] &= -0,000971 (\bar{4}, 9870550), \\
 \overline{(m'', m')_1} &= 1,626635 (0, 2112901), \\
 \overline{(m'', m')_1} [(q' - q'')^3 + (q' - q'') (p' - p'')^2 + 2p' (p' q'' - q' p'')] &= 0,000088 (\bar{5}, 9464135), \\
 \frac{1}{6} (m'', m')_4 [(q' - q'')^3 + (q' - q'') (p' - p'')^2 + 2p' (p' q'' - q' p'')] &= 0,000575 (\bar{4}, 7600857), \\
 (m'', m')_{10} [2h''h' (q' - q'') + (h'l'' + h''l') p'' - 2l'h'' p'] &= 0,000013 (\bar{5}, 1030788), \\
 (m'', m')_{11} [2h''h' (q' - q'') + (h'l'' + h''l') p'' - 2l'h'' p'] &= 0,000719 (\bar{4}, 8569811), \\
 (m'', m')_{12} [2h''h' (q' - q'') + (h'l'' + h''l') p'' - 2l'h'' p'] &= -0,000204 (\bar{4}, 3105524), \\
 \frac{1}{2} (m'', m') (q' - q'') (l''^2 + h''^2 + 3p''^2 + 3q''^2) &= 0,000011 (\bar{5}, 0526822).
 \end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,002390.

Земля и Марсъ.

$$\begin{aligned}
 (m'', m''') (q''' - q'') &= 0,006452 (\bar{3}, 8096706), \\
 \frac{1}{2} (m'', m''') [2(q'' q''' + p'' p''') (q''' - q'') - q''' (q''' - q'')^2 + (p''' - p'')^2 - 3q'' (q'''^2 - q''^2) - 3p'' (q''' p''' - q'' p'')] \\
 &= -0,000003 (\bar{6}, 5278442), \\
 (m'', m''')_1 [l'''^2 + h'''^2 + l''^2 + h''^2] (q''' - q'') &= -0,000115 (\bar{4}, 0621735), \\
 (m'', m''')_4 [l'''^2 + h'''^2 + l''^2 + h''^2] (q''' - q'') &= 0,000452 (\bar{4}, 6548146),
 \end{aligned}$$

$$(m'', m''')_2 [(l''^2 - h''^2)(q''' - q'') + 2l''h''(p''' - p'')] = 0,000017 (\bar{5}, 2215700),$$

$$\overline{(m'', m''')} = \frac{3m''n''\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = -0,546258 (\bar{1}, 7373978),$$

$$\overline{(m'', m''')} [(l''^2 - h''^2)(q''' - q'') + 2l''h''(p''' - p'')] = -0,000035 (\bar{5}, 5456763),$$

$$(m'', m''')_{13} [(l''^2 - h''^2)(q''' - q'') + 2l''h''(p''' - p'')] = 0,000005 (\bar{6}, 7039013),$$

$$(m'', m''')_{14} [(l''^2 - h''^2)(q''' - q'') + 2l''h''(p''' - p'')] = -0,000014 (\bar{5}, 1526172),$$

$$2(m'', m''')_{15} [(l''l''' + h''h''')(q''' - q'') - (h''l''' - h'l''')p'''] = -0,000000 (\bar{8}, 2901459),$$

$$2(m'', m''')_{16} [l''l''' + h''h''')(q''' - q'') - (h''l''' - h'l''')p''] = 0,000025 (\bar{5}, 4061143),$$

$$\frac{1}{3}(m'', m''')_4 [(q''' - q'')^3 + (q''' - q'')(p''' - p'')^2 - p'''(p'''q'' - q'''p'')] = 0,000017 (\bar{5}, 2440560),$$

$$(m'', m''')_1 [(q''' - q'')^3 + (q''' - q'')(p''' - p'')^2 - p'''(p'''q'' - q'''p'')] = -0,000013 (\bar{5}, 1285362),$$

$$\overline{(m'', m''')} = \frac{3m''n''\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = 0,024537 (\bar{2}, 3898266),$$

$$(m'', m''')_1 [(q''' - q'')^3 + (q''' - q'')(p''' - p'')^2 + 2p'''(p'''q'' - q'''p'')] = 0,000000 (\bar{7}, 7441964),$$

$$\frac{1}{6}(m'', m''')_4 [(q''' - q'')^3 + (q''' - q'')(p''' - p'')^2 + 2p'''(p'''q'' - q'''p'')] = 0,000009 (\bar{6}, 9430260),$$

$$(m'', m''')_{10} [2h''h'''(q''' - q'') + (h''l''' + h'l''')p'' - 2l''h''p'''] = -0,000010 (\bar{5}, 0029168),$$

$$(m'', m''')_{11} [2h''h'''(q''' - q'') + (h''l''' + h'l''')p'' - 2l''h''p'''] = -0,000241 (\bar{4}, 3819060),$$

$$(m'', m''')_{12} [2h''h'''(q''' - q'') + (h''l''' + h'l''')p'' - 2l''h''p'''] = 0,000063 (\bar{5}, 7969724),$$

$$\frac{1}{2}(m'', m''')(q''' - q'')[l''^2 + h''^2 + 3p''^2 + 3q''^2] = 0,000000 (\bar{7}, 9588897).$$

Слѣд. сумма членовъ третьяго порядка = -0,000801.

Земля и Юпитеръ.

$$(m'', m^{IV})(q^{IV} - q'') = -0,023724 (\bar{2}, 3751879),$$

$$\frac{1}{2}(m'', m^{IV})[2(q''q^{IV} + p''p^{IV})(q^{IV} - q'') - q^{IV}((q^{IV} - q'')^2 + (p^{IV} - p'')^2) - 3q''(q^{IV2} - q''^2) - 3p''(q^{IV}p^{IV} - q''p'')] = 0,000006 (\bar{6}, 7954738),$$

$$(m'', m^{IV})_1 [l^{IV2} + h^{IV2} + l'^2 + h'^2](q^{IV} - q'') = 0,000004 (\bar{6}, 5666411),$$

$$(m'', m^{IV})_4 [l^{IV2} + h^{IV2} + l'^2 + h'^2](q^{IV} - q'') = -0,000104 (\bar{4}, 0208913),$$

$$(m'', m^{IV})_2 [(l^{IV2} - h^{IV2})(q^{IV} - q'') + 2l^{IV}h^{IV}(p^{IV} - p'')] = -0,000023 (\bar{5}, 3690520),$$

$$\overline{(m'', m^{IV})} = \frac{3m^{IV}n''\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 1,429374 (0, 1551459),$$

$$\overline{(m'', m^{IV})} [(l^{IV2} - h^{IV2})(q^{IV} - q'') + 2l^{IV}h^{IV}(p^{IV} - p'')] = 0,000018 (\bar{5}, 2596330),$$

$$(m'', m^{IV})_{13} [(l'^2 - h'^2)(q^{IV} - q'') + 2l'h''(p^{IV} - p'')] = 0,000007 (\bar{6}, 8228921),$$

$$\begin{aligned}
(m'', m'')_{14} [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] &= -0,000016 (\bar{5}, 1997736), \\
2(m'', m'')_{15} [(l''l'' + h''h'')(q'' - q'') - (h''l'' - h''l'')p''] &= -0,000674 (\bar{4}, 8287556), \\
2(m'', m'')_{16} [(l''l'' + h''h'')(q'' - q'') - (h''l'' - h''l'')p''] &= 0,000761 (\bar{4}, 8812147), \\
\frac{1}{3}(m'', m'')_4 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 - p''(p''q'' - q''p'')] &= -0,000007 (\bar{6}, 8499455), \\
(m'', m'')_1 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 - p''(p''q'' - q''p'')] &= 0,000000 (\bar{7}, 8728166), \\
\overline{(m'', m'')}_1 &= \frac{3m''n''\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -1,693254 (0, 2287221), \\
\overline{(m'', m'')}_1 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 + 2p''(p''q'' - q''p'')] &= 0,000003 (\bar{6}, 4767914), \\
\frac{1}{6}(m'', m'')_4 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 + 2p''(p''q'' - q''p'')] &= -0,000003 (\bar{6}, 5489155), \\
(m'', m'')_{10} [2h''h''(q'' - q'') + (h''l'' + h''l'')p'' - 2l''h''p''] &= -0,000833 (\bar{4}, 9207915), \\
(m'', m'')_{11} [2h''h''(q'' - q'') + (h''l'' + h''l'')p'' - 2l''h''p''] &= -0,001069 (\bar{3}, 0290910), \\
(m'', m'')_{12} [2h''h''(q'' - q'') + (h''l'' + h''l'')p'' - 2l''h''p''] &= 0,000041 (\bar{5}, 6185965), \\
\frac{1}{2}(m'', m'')(q'' - q'')[l''^2 + h''^2 + 3p''^2 + 3q''^2] &= -0,000003 (\bar{6}, 5247570).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,000104.

Земля и Сатурнъ.

$$\begin{aligned}
(m'', m'')(q'' - q'') &= -0,005295 (\bar{3}, 7239022), \\
\frac{1}{2}(m'', m'')[2(q''q'' + p''p'')(q'' - q'') - q''((q'' - q'')^2 + (p'' - p'')^2) - 3q''(q''^2 - q''^2) - 3p''(q''p'' - q''p'')] &= 0,000005 (\bar{6}, 70068767), \\
(m'', m'')_1 [l''^2 + h''^2 + l''^2 + h''^2](q'' - q'') &= 0,000003 (\bar{6}, 4865013), \\
(m'', m'')_4 [l''^2 + h''^2 + l''^2 + h''^2](q'' - q'') &= -0,000028 (\bar{5}, 4520306), \\
(m'', m'')_2 [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] &= -0,000004 (\bar{6}, 6565878), \\
\overline{(m'', m'')} &= \frac{3m''n''\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,077122 (\bar{2}, 8871801), \\
\overline{(m'', m'')} [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] &= 0,000004 (\bar{6}, 6282529), \\
(m'', m'')_{13} [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] &= -0,000000 (\bar{7}, 1950408), \\
(m'', m'')_{14} [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] &= 0,000000 (\bar{7}, 5657016), \\
2(m'', m'')_{15} [(l''l'' + h''h'')(q'' - q'') - (h''l'' - h''l'')p''] &= 0,000026 (\bar{5}, 4091115), \\
2(m'', m'')_{16} [(l''l'' + h''h'')(q'' - q'') - (h''l'' - h''l'')p''] &= -0,000026 (\bar{5}, 4240276), \\
\frac{1}{3}(m'', m'')_4 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 - p''(p''q'' - q''p'')] &= -0,000005 (\bar{6}, 7168232),
\end{aligned}$$

$$(m'', m'')_1 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 - p''(p''q'' - q''p'')] = 0,000002 (\bar{6}, 2284152),$$

$$\overline{(m'', m'')} = \frac{3m''n''\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,080453 (\bar{2}, 9056501),$$

$$\overline{(m'', m'')} [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 + 2p''(p''q'' - q''p'')] = 0,000002 (\bar{6}, 3947509),$$

$$\frac{1}{6}(m'', m'')_4 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 + 2p''(p''q'' - q''p'')] = -0,000003 (\bar{5}, 4157932),$$

$$(m'', m'')_{10} [2h''h''(q'' - q'') + (h''l'' + h''l'')p'' - 2l''h''p''] = -0,000064 (\bar{5}, 8036736),$$

$$(m'', m'')_{11} [2h''h''(q'' - p'') + (h''l'' + h''l'')p'' - 2l''h''p''] = -0,000068 (\bar{5}, 8358858),$$

$$(m'', m'')_{12} [2h''h''(q'' - q'') + (h''l'' + h''l'')p'' - 2l''h''p''] = 0,000000 (\bar{7}, 8741804),$$

$$\frac{1}{2}(m'', m'')(q'' - q'')(l''^2 + h''^2 + 3p''^2 - q''^2) = -0,000000 (\bar{7}, 8731213).$$

Слѣд. сумма членовъ бретьяго порядка = 0,000024.

Земля и Уранъ.

$$(m'', m'') (q'' - q'') = -0,000030 (\bar{5}, 4849513),$$

$$\frac{1}{2}(m'', m'') [2(q''q'' + p''p'')(q'' - q'') - q''((q'' - q'')^2 + (p'' - p'')^2) - 3q''(q''^2 - q''^2) - 3p''(q''p'' - q''p'')], \\ = -0,000000 (\bar{9}, 4457074),$$

$$(m'', m'')_1 (l''^2 + h''^2 + l''^2 + h''^2)(q'' - q'') = -0,000000 (\bar{10}, 4875477),$$

$$(m'', m'')_4 (l''^2 + h''^2 + l''^2 + h''^2)(q'' - q'') = 0,000000 (\bar{7}, 0549895),$$

$$(m'', m'')_2 [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] = 0,000000 (\bar{9}, 8965760),$$

$$\overline{(m'', m'')} = \frac{3m''n''\alpha^3(1'' - 7\alpha^2)}{32(1 - 7\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,001906 (\bar{3}, 2802594),$$

$$\overline{(m'', m'')} [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] = -0,000000 (\bar{9}, 8898538),$$

$$(m'', m'')_{13} [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] = 0,000000 (\bar{8}, 1151334),$$

$$(m'', m'')_{14} [(l''^2 - h''^2)(q'' - q'') + 2l''h''(p'' - p'')] = -0,000000 (\bar{8}, 4837766),$$

$$2(m'', m'')_{15} [(l''l'' + h''h'')(q'' - q'') - (h''l'' - h''l'')p''] = 0,000001 (\bar{6}, 0859237),$$

$$2(m'', m'')_{16} [(l''l'' + h''h'')(q'' - q'') - (h''l'' - h''l'')p''] = -0,000001 (\bar{6}, 0896228),$$

$$\frac{1}{3}(m'', m'')_4 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 - p''(p''q'' - q''p'')] = 0,000000 (\bar{9}, 4496913),$$

$$(m'', m'')_1 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 - p''(p''q'' - q''p'')] = -0,000000 (\bar{11}, 3593708),$$

$$\overline{(m'', m'')} = \frac{3m''n''\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,001926 (\bar{3}, 2847053),$$

$$\overline{(m'', m'')} [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 + 2p''(p''q'' - q''p'')] = -0,000000 (\bar{9}, 1385893),$$

$$\frac{1}{6}(m'', m'')_4 [(q'' - q'')^3 + (q'' - q'')(p'' - p'')^2 + 2p''(p''q'' - q''p'')] = 0,000000 (\bar{9}, 1486613),$$

$$\begin{aligned}(m'', m'')_{10} [2h''h''(q'' - q'') + (h''l'' + h''l'')p'' - 2l''h''p''] &= 0,000002(\bar{6},3105202), \\(m'', m'')_{11} [2h''h''(q'' - q'') + (h''l'' + h''l'')p'' - 2l''p''h''] &= 0,000002(\bar{6},3184858), \\(m'', m'')_{12} [2h''h''(q'' - q'') + (h''l'' + h''l'')p'' - 2l''h''p''] &= -0,000000(\bar{9},8016089), \\ \frac{1}{2}(m'', m'')(q'' - q'')(l''^2 + h''^2 + 3p''^2 + 3q''^2) &= 0,000000(\bar{9},6341704),\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Марсъ и Меркурій.

$$\begin{aligned}(m''', m)(q - q''') &= 0,000803(\bar{4},9049350), \\ \frac{1}{2}(m''', m)[2(q'''q + p'''p)(q - q''') - q((q - q''')^2 + (p - p''')^2) - 3q'''(q^2 - q'''^2) - 3p'''(qp - q'''p''')] &= -0,000007(\bar{6},8435135), \\(m''', m)_1(h^2 + l^2 + h'''^2 + l'''^2)(q - q''') &= -0,000004(\bar{6},5981690), \\(m''', m)_4(h^2 + l^2 + h'''^2 + l'''^2)(q - q''') &= 0,000076(\bar{5},8839611), \\(m''', m)_2(l^2 - h^2)(q - q''') + 2lh(p - p''') &= 0,000003(\bar{6},4824370), \\ \overline{(m''', m)} &= 0,002022(\bar{3},3058028), \\ \overline{(m''', m)}[(l^2 - h^2)(q - q''') + 2lh(p - p''')] &= -0,000002(\bar{6},2551147), \\(m''', m)_{13}[(l'''^2 - h'''^2)(q - q''') + 2l'''h'''(p - p''')] &= 0,000001(\bar{6},1781568), \\(m''', m)_{14}[(l'''^2 - h'''^2)(q - q''') + 2l'''h'''(p - p''')] &= -0,000004(\bar{6},5626985), \\ 2(m''', m)_{15}[(l''' + hh''')(q - q''') - (hl''' - h'''l)p] &= 0,000095(\bar{5},9786275), \\ 2(m''', m)_{16}[(l''' + hh''')(q - q''') - (hl''' - h'''l)p] &= -0,000118(\bar{4},0735147), \\ \frac{1}{3}(m''', m)_4[(q - q''')^3 + (q - q''')(p - p''')^2 - p(pq''' - qp''')] &= 0,000004(\bar{6},6232494), \\(m''', m)_4[(q - q''')^3 + (q - q''')(p - p''')^2 - p(pq''' - qp''')] &= -0,000000(\bar{7},8145786), \\ \overline{(m''', m)}_4 &= -0,002918(\bar{3},4651117), \\ \overline{(m''', m)}_1[(q - q''')^3 + (q - q''')(p - p''')^2 + 2p(pq''' - qp''')] &= -0,000001(\bar{6},1618175), \\ \frac{1}{6}(m''', m)_4[(q - q''')^3 + (q - q''')(p - p''')^2 + 2p(pq''' - qp''')] &= 0,000002(\bar{6},2907338), \\(m''', m)_{10}[2hh'''(q - q''') + (hl''' + h'''l)p''' - 2lh'''p] &= -0,000009(\bar{6},9861628), \\(m''', m)_{11}[2hh'''(q - q''') + (hl''' + h'''l)p''' - 2lh'''p] &= -0,000015(\bar{5},1755673), \\(m''', m)_{12}[2hh'''(q - q''') + (hl''' + h'''l)p''' - 2lh'''p] &= 0,000000(\bar{7},9866861), \\ \frac{1}{2}(m''', m)(q - q''')(l'''^2 + h'''^2 + 3p'''^2 + 3q'''^2) &= 0,000005(\bar{6},6766658).\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000112.

Марсъ и Венера.

$$\begin{aligned}
(m''', m')(q' - q'') &= -0,002888 (\bar{3}, 4607327), \\
\frac{1}{2}(m''', m')[2(q'''q' + p'''p')(q' - q'') - q'((q' - q''')^2 + (p' - p''')^2) - 3q'''(q'^2 - q''^2) - 3p'''(q'p' - q''p'')] \\
&= -0,000012 (\bar{5}, 0705590), \\
(m''', m')_1 [l'^2 + h'^2 + l''^2 + h''^2] (q' - q'') &= 0,000014 (\bar{5}, 1528408), \\
(m''', m')_4 [l'^2 + h'^2 + l''^2 + h''^2] (q' - q'') &= -0,000084 (\bar{5}, 9251661), \\
(m''', m')_2 [(l'^2 - h'^2)(q' - q'') + 2l'h'(p' - p'')] &= 0,000000 (\bar{7}, 4223208), \\
\overline{(m''', m')} &= -0,122868 (\bar{1}, 0894399), \\
\overline{(m''', m')} [(l'^2 - h'^2)(q' - q'') + 2l'h'(p' - p'')] &= 0,000000 (\bar{7}, 2537928), \\
(m''', m')_{13} [(l''^2 - h''^2)(q' - q'') + 2l''h''(p' - p'')] &= 0,000147 (\bar{4}, 1690517), \\
(m''', m')_{14} [(l''^2 - h''^2)(q' - q'') + 2h''l'(p' - p'')] &= -0,000812 (\bar{4}, 9093567), \\
2(m''', m')_{15} [(l'l''' + h'h''')(q' - q'') - (h'l''' - h''l')p'] &= 0,000009 (\bar{6}, 9834382), \\
2(m''', m')_{16} [(l'l''' + h'h''')(q' - q'') - (h'l''' - h''l')p'] &= -0,000025 (\bar{5}, 4034990), \\
\frac{1}{3}(m''', m')_4 [(q' - q'')^3 + (q' - q'')(p' - p'')^2 - p'(p'q''' - q'p''')] &= -0,000029 (\bar{5}, 4694035), \\
(m''', m')_1 [(q' - q'')^3 + (q' - q'')(p' - p'')^2 - p'(p'q''' - q'p''')] &= 0,000015 (\bar{5}, 1741995), \\
\overline{(m', m''')}_1 &= -0,073210 (\bar{2}, 8645726), \\
\overline{(m''', m')}_1 [(q' - q'')^3 + (q' - q'')(p' - p'')^2 + 2p'(p'q''' - q'p''')] &= -0,000007 (\bar{6}, 8285492), \\
\frac{1}{6}(m''', m')_4 [(q' - q'')^3 + (q' - q'')(p' - p'')^2 + 2p'(p'q''' - q'p''')] &= 0,000024 (\bar{5}, 3800711), \\
(m''', m')_{10} [2h'h'''(q' - q'') + (h'l''' + h''l')p''' - 2l'h'''p'] &= -0,000001 (\bar{6}, 1281162), \\
(m''', m')_{11} [2h'h'''(q' - q'') + (h'l''' + h''l')p''' - 2l'h'''p'] &= -0,000006 (\bar{6}, 8038278), \\
(m''', m')_{12} [2h'h'''(q' - q'') + (h'l''' + h''l')p''' - 2l'h'''p'] &= 0,000001 (\bar{6}, 0512081), \\
\frac{1}{2}(m''', m')(q' - q'')(l''^2 + h''^2 + 3q''^2 + 3p''^2) &= -0,000017 (\bar{5}, 2324635).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,000939.

Марсъ и Земля.

$$\begin{aligned}
(m''', m'')(q'' - q''') &= -0,038992 (\bar{2}, 5909726), \\
\frac{1}{2}(m''', m'')[2(q'''q'' + p'''p'')(q'' - q''') - q''((q'' - q''')^2 + (p'' - p''')^2) - 3q'''(q''^2 - q'''^2) - 3p'''(p''q'' - q''p''')] \\
&= 0,000061 (\bar{5}, 7862616), \\
(m''', m'')_1 [l''^2 + h''^2 + l'''^2 + h'''^2] (q'' - q''') &= 0,000697 (\bar{4}, 8434755),
\end{aligned}$$

$$\begin{aligned}
(m''', m'')_4 [l''^2 + h''^2 + l'''^2 + h'''^2] (q'' - q''') &= -0,002730 (\bar{3}, 4361166), \\
(m''', m'')_2 [(l''^2 - h''^2) (q'' - q''') + 2l''h'' (p'' - p''')] &= -0,000012 (\bar{5}, 0965964), \\
\overline{(m''', m'')} &= -3,301413 (0, 5186998), \\
\overline{(m''', m'')} [(l''^2 - h''^2) (q'' - q''') + 2l''h'' (p'' - p''')] &= -0,000026 (\bar{5}, 4207027), \\
(m''', m'')_{13} [(l'''^2 - h'''^2) (q'' - q''') + 2l'''h''' (p'' - p''')] &= -0,000246 (\bar{4}, 3914114), \\
(m''', m'')_{14} [(l'''^2 - h'''^2) (q'' - q''') + 2l'''h''' (p'' - p''')] &= 0,000692 (\bar{4}, 8401278), \\
2(m''', m'')_{15} [(l''l''' + h''h''') (q'' - q''') - (h''l''' - h'''l'') p''] &= -0,000000 (\bar{7}, 4024062), \\
2(m''', m'')_{16} [l''l''' + h''h''' (q'' - q''') - (h''l''' - h'''l'') p''] &= 0,000330 (\bar{4}, 5184246), \\
\frac{1}{3}(m''', m'')_4 [(q'' - q''')^3 + (q'' - q''') (p'' - p''')^2 - p'' (p''q''' - q''p''')] &= -0,000106 (\bar{4}, 0253580), \\
(m''', m'')_4 [(q'' - q''')^3 + (q'' - q''') (p'' - p''')^2 - p'' (p''q''' - q''p''')] &= 0,000081 (\bar{5}, 9098382), \\
\overline{(m''', m'')}_1 &= 0,148295 (1, 1711286), \\
\overline{(m''', m'')}_1 [(q'' - q''')^3 + (q'' - q''') (p'' - p''')^2 + 2p'' (p''q''' - q''p''')] &= -0,000003 (\bar{6}, 5254992), \\
\frac{1}{6}(m''', m'')_4 [(q'' - q''')^3 + (q'' - q''') (p'' - p''')^2 + 2p'' (p''q''' - q''p''')] &= -0,000053 (\bar{5}, 7243280), \\
(m''', m'')_{10} [2h''h''' (q'' - q''') + (h''l''' + h'''l'') p''' - 2l''h''p'''] &= 0,000042 (\bar{5}, 6230283), \\
(m''', m'')_{11} [2h''h''' (q'' - q''') + (h''l''' + h'''l'') p''' - 2l''h''p'''] &= 0,001004 (\bar{3}, 0020173), \\
(m''', m'')_{12} [2h''h''' (q'' - q''') + (h''l''' + h'''l'') p''' - 2l''h''p'''] &= -0,000261 (\bar{4}, 4170837), \\
\frac{1}{2}(m''', m'') (q'' - q''') [l''^2 + h''^2 + 3p'''^2 + 3q'''^2] &= -0,000230 (\bar{4}, 3627034).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,005544.

Марсъ и Юпитеръ.

$$\begin{aligned}
(m''', m^{IV}) (q^{IV} - q''') &= -0,365741 (\bar{1}, 5631740), \\
\frac{1}{2}(m''', m^{IV}) [2(q'''q^{IV} + p'''p^{IV}) (q^{IV} - q''') - q^{IV} ((q^{IV} - q''')^2 + (p^{IV} - p''')^2) - 3q''' (q^{IV} - q''') - 3p''' (q^{IV}p^{IV} - q'''p''')] &= 0,000374 (\bar{4}, 5733268), \\
(m''', m^{IV})_4 [l^{IV2} + h^{IV2} + l'''^2 + h'''^2] (q^{IV} - q''') &= 0,000620 (\bar{4}, 7921802), \\
(m''', m^{IV})_4 [l^{IV2} + h^{IV2} + l'''^2 + h'''^2] (q^{IV} - q''') &= -0,008102 (\bar{3}, 9085933), \\
(m''', m^{IV})_2 [(l^{IV2} - h^{IV2}) (q^{IV} - q''') + 2l^{IV}h^{IV} (p^{IV} - p''')] &= 0,000225 (\bar{4}, 3515948), \\
\overline{(m''', m^{IV})} &= \frac{3m^{IV}n'''\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 1,806086 (0, 2567384), \\
\overline{(m''', m^{IV})} [(l^{IV2} - h^{IV2}) (q^{IV} - q''') + 2l^{IV}h^{IV} (p^{IV} - p''')] &= -0,000099 (\bar{5}, 9958358), \\
(m''', m^{IV})_{13} [(l'''^2 - h'''^2) (q^{IV} - q''') + 2l'''h''' (p^{IV} - p''')] &= 0,002213 (\bar{3}, 3450137),
\end{aligned}$$

$$\begin{aligned}
(m''', m'')_{14} [(l''^2 - h''^2)(q'' - q''') + 2l''h''(p'' - p''')] &= -0,003573 (\bar{3}, 5531356), \\
2(m''', m'')_{15} [(l''l'' + h''h'')(q'' - q''') - (h''l'' - h''l'')p''] &= 0,007575 (\bar{3}, 8793925), \\
2(m''', m'')_{16} [(l''l'' + h''h'')(q'' - q''') - (h''l'' - h''l'')p''] &= -0,010209 (\bar{2}, 0089876), \\
\frac{1}{3}(m''', m'')_4 [(q'' - q''')^3 + (q'' - q''')(p'' - p''')^2 - p''(p''q'' - q''p'')] &= -0,000281 (\bar{4}, 4488191), \\
(m''', m'')_1 [(q'' - q''')^3 + (q'' - q''')(p'' - p''')^2 - p''(p''q'' - q''p'')] &= 0,000064 (\bar{5}, 8095273), \\
\overline{(m''', m'')}_1 &= \frac{3m''n''\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -3,282281 (0, 5161758), \\
\overline{(m''', m'')}_1 [(q'' - q''')^3 + (q'' - q''')(p'' - p''')^2 + 2p''(p''q'' - q''p'')] &= -0,000034 (\bar{5}, 5285912), \\
\frac{1}{6}(m''', m'')_4 [(q'' - q''')^3 + (q'' - q''')(p'' - p''')^2 + 2p''(p''q'' - q''p'')] &= 0,000050 (\bar{5}, 7032315), \\
(m''', m'')_{10} [2h''h''(q'' - q''') + (h''l'' + h''l'')p'' - 2l''h''p''] &= 0,002312 (\bar{3}, 3640655), \\
(m''', m'')_{11} [2h''h''(q'' - q''') + (h''l'' + h''l'')p'' - 2l''h''p''] &= 0,004131 (\bar{3}, 6160920), \\
(m''', m'')_{12} [2h''h''(q'' - q''') + (h''l'' + h''l'')p'' - 2l''h''p''] &= -0,000343 (\bar{4}, 5353142), \\
\frac{1}{2}(m''', m'')(q'' - q''')[l''^2 + h''^2 + 3p''^2 + 3q''^2] &= -0,002162 (\bar{3}, 3349048).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000221.

Марсъ и Сатурнъ.

$$\begin{aligned}
(m''', m'')(q'' - q''') &= -0,023860 (\bar{2}, 3776776), \\
\frac{1}{2}(m''', m'')[2(q''q'' + p''p'')(q'' - q''') - q''((q'' - q''')^2 + (p'' - p''')^2) - 3q''(q''^2 - q'''^2) - 3p''(q''p'' - q''p'')] &= 0,000025 (\bar{5}, 3947906), \\
(m''', m'')_1 [l''^2 + h''^2 + l''^2 + h''^2](q'' - q''') &= 0,000011 (\bar{5}, 0564309), \\
(m''', m'')_4 [l''^2 + h''^2 + l''^2 + h''^2](q'' - q''') &= -0,000462 (\bar{4}, 6647283), \\
(m''', m'')_2 [(l''^2 - h''^2)(q'' - q''') + 2l''h''(p'' - p''')] &= -0,000019 (\bar{5}, 2918026), \\
\overline{(m''', m'')} &= \frac{3m''n''\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,137441 (\bar{1}, 1381177), \\
\overline{(m''', m'')} [(l''^2 - h''^2)(q'' - q''') + 2l''h''(p'' - p''')] &= 0,000017 (\bar{5}, 2208672), \\
(m''', m'')_{13} [(l''^2 - h''^2)(q'' - q''') + 2l''h''(p'' - p''')] &= 0,000150 (\bar{4}, 1766595), \\
(m''', m'')_{14} [(l''^2 - h''^2)(q'' - q''') + 2l''h''(p'' - p''')] &= -0,000355 (\bar{4}, 5508226), \\
2(m''', m'')_{15} [(l''l'' + h''h'')(q'' - q''') - (h''l'' - h''l'')p''] &= 0,000394 (\bar{4}, 5953672), \\
2(m''', m'')_{16} [(l''l'' + h''h'')(q'' - q''') - (h''l'' - h''l'')p''] &= -0,000428 (\bar{4}, 6310914), \\
\frac{1}{3}(m''', m'')_4 [(q'' - q''')^3 + (q'' - q''')(p'' - p''')^2 - p''(p''q'' - q''p'')] &= -0,000040 (\bar{5}, 5987960),
\end{aligned}$$

$$(m''', m'')_1 [(q'' - q''')^3 + (q'' - q''')(p'' - p''')^2 - p''(p''q''' - q''p''')] = 0,000003 (\bar{6},4676199),$$

$$\overline{(m''', m'')} = \frac{3m''n''\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,153154 (\bar{1},1851304),$$

$$\overline{(m''', m'')} [(q'' - q''')^3 + (q'' - q''')(p'' - p''')^2 + 2p''(p''q''' - q''p''')] = -0,000006 (\bar{6},7598560),$$

$$\frac{1}{6} (m''', m'')_4 [(q'' - q''')^3 + (q'' - q''')(p'' - p''')^2 + 2p''(p''q''' - q''p''')] = 0,000006 (\bar{6},8092333),$$

$$(m''', m'')_{10} [2h'''h''(q'' - q''') + (h''l''' + h'''l'')p''' - 2l''h'''p''] = 0,000744 (\bar{4},8717660),$$

$$(m''', m'')_{11} [2h'''h''(q'' - p''') + (h''l''' + h'''l'')p''' - 2l''h'''p''] = 0,000884 (\bar{4},9465518),$$

$$(m''', m'')_{12} [2h'''h''(q'' - q''') + (h''l''' + h'''l'')p''' - 2l''h'''p''] = -0,000024 (\bar{5},3841690),$$

$$\frac{1}{2} (m''', m'')(q'' - q''')(l'''^2 + h'''^2 + 3p'''^2 + 3q'''^2) = -0,000141 (\bar{4},1494084).$$

Слѣд. сумма членовъ третьяго порядка = -0,000059.

Марсъ и Уранъ.

$$(m''', m^{VI})(q^{VI} - q''') = -0,000259 (\bar{4},4126442),$$

$$\frac{1}{2} (m''', m^{VI}) [2(q'''q^{VI} + p'''p^{VI})(q^{VI} - q''') - q^{VI}((q^{VI} - q''')^2 + (p^{VI} - p''')^2) - 3q'''(q^{VI2} - q'''^2) - 3p'''(q^{VI}p^{VI} - q'''p''')] = 0,000000 (\bar{7},0948117),$$

$$(m''', m^{VI})_1 (l^{VI2} + h^{VI2} + l'''^2 + h'''^2)(q^{VI} - q''') = 0,000000 (\bar{8},4300758),$$

$$(m''', m^{VI})_4 (l^{VI2} + h^{VI2} + l'''^2 + h'''^2)(q^{VI} - q''') = -0,000004 (\bar{6},6338617),$$

$$(m''', m^{VI})_2 [(l^{VI2} - h^{VI2})(q^{VI} - q''') + 2l^{VI}h^{VI}(p^{VI} - p''')] = 0,000000 (\bar{8},9575189),$$

$$\overline{(m''', m^{VI})} = \frac{3m''n''\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,003548 (\bar{3},5500102),$$

$$\overline{(m''', m^{VI})} [(l^{VI2} - h^{VI2})(q^{VI} - q''') + 2l^{VI}h^{VI}(p^{VI} - p''')] = -0,000000 (\bar{8},9416509),$$

$$(m''', m^{VI})_{13} [(l'''^2 - h'''^2)(q^{VI} - q''') + 2l'''h'''(p^{VI} - p''')] = 0,000000 (\bar{8},9670316),$$

$$(m''', m^{VI})_{14} [(l'''^2 - h'''^2)(q^{VI} - q''') + 2l'''h'''(p^{VI} - p''')] = -0,000000 (\bar{7},1375531),$$

$$2(m''', m^{VI})_{15} [(l'''l^{VI} + h'''h^{VI})(q^{VI} - q''') - (h^{VI}l''' - h'''l^{VI})p^{VI}] = -0,000016 (\bar{5},2142089),$$

$$2(m''', m^{VI})_{16} [(l'''l^{VI} + h'''h^{VI})(q^{VI} - q''') - (h^{VI}l''' - h'''l^{VI})p^{VI}] = 0,000017 (\bar{5},2228375),$$

$$\frac{1}{3} (m''', m^{VI})_4 [(q^{VI} - q''')^3 + (q^{VI} - q''')(p^{VI} - p''')^2 - p^{VI}(p^{VI}q''' - q^{VI}p''')] = -0,000000 (\bar{8},8772550),$$

$$(m''', m^{VI})_1 [(q^{VI} - q''')^3 + (q^{VI} - q''')(p^{VI} - p''')^2 - p^{VI}(p^{VI}q''' - q^{VI}p''')] = 0,000000 (\bar{9},1505903),$$

$$\overline{(m''', m^{VI})} = \frac{3m''n''\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,003633 (\bar{3},5603181),$$

$$\overline{(m''', m^{VI})} [(q^{VI} - q''')^3 + (q^{VI} - q''')(p^{VI} - p''')^2 + 2p^{VI}(p^{VI}q''' - p'''q^{VI})] = 0,000000 (\bar{8},0271857),$$

$$\frac{1}{6} (m''', m^{VI})_4 [(q^{VI} - q''')^3 + (q^{VI} - q''')(p^{VI} - p''')^2 + 2p^{VI}(p^{VI}q''' - q^{VI}p''')] = -0,000000 (\bar{8},0392014),$$

$$\begin{aligned}
(m''', m'')_{10} [2h'''h''(q'' - q''') + (h''l''' + h'''l'')p''' - 2l''h'''p''] &= 0,000004(\bar{6},5866052), \\
(m''', m'')_{11} [2h'''h''(q'' - q''') + (h''l''' + h'''l'')p''' - 2l''h'''p''] &= 0,000004(\bar{6},6050982), \\
(m''', m'')_{12} [2h'''h''(q'' - q''') + (h''l''' + h'''l'')p''' - 2l''h'''p''] &= -0,000000(\bar{8},4511142), \\
\frac{1}{2}(m''', m'')(q'' - q''')(l'''^2 + h'''^2 + 3p'''^2 + 3q'''^2) &= -0,000001(\bar{6},1843750),
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка $= 0,000004$.

Юпитеръ и Меркурій.

$$\begin{aligned}
(m'', m)(q - q'') &= 0,0000013(\bar{5},1320396), \\
\frac{1}{2}(m'', m)[2(q''q + p''p)(q - q'') - q((q - q'')^2 + (p - p'')^2) - 3q''(q^2 - q''^2) - 3p''(qp - q''p'')] &= -0,000000(\bar{8},9546759), \\
(m'', m)_1 [(l^2 + h^2 + l''^2 + h''^2)(q - q'')] &= -0,000000(\bar{9},7054177), \\
(m'', m)_4 [l^2 + h^2 + l''^2 + h''^2](q - q'') &= 0,000000(\bar{7},9655471), \\
(m'', m)_2 [(l^2 - h^2)(q - q'') + 2lh(p - p'')] &= 0,000000(\bar{8},8306383), \\
\overline{(m'', m)} &= 0,000062(\bar{5},7858483), \\
\overline{(m'', m)} [(l^2 - h^2)(q - q'') + 2lh(p - p'')] &= -0,000000(\bar{7},0322238), \\
(m'', m)_{13} [(l''^2 - h''^2)(q - q'') + 2l''h''(p - p'')] &= -0,000000(\bar{8},4576187), \\
(m'', m)_{14} [(l''^2 - h''^2)(q - q'') + 2l''h''(p - p'')] &= 0,000000(\bar{8},8269502), \\
2(m'', m)_{15} [(l''l + h''h)(q - q'') - (hl'' - h''l)p] &= 0,000000(\bar{7},8973690), \\
2(m'', m)_{16} [(l''l + h''h)(q - q'') - (hl'' - h''l)p] &= -0,000000(\bar{7},9049327), \\
\frac{1}{3}(m'', m)_4 [(q - q'')^3 + (q - q'')(p - p'')^2 - p(pq'' - qp'')] &= 0,000000(\bar{8},9974862), \\
(m'', m)_1 [(q - q'')^3 + (q - q'')(p - p'')^2 - p(pq'' - qp'')] &= -0,000000(\bar{9},2144781), \\
\overline{(m'', m)}_1 &= -0,000038(\bar{5},5859245), \\
\overline{(m'', m)}_1 [(q - q'')^3 + (q - q'')(p - p'')^2 + 2p(pq'' - qp'')] &= -0,000000(\bar{8},4223372), \\
\frac{1}{6}(m'', m)_4 [(q - q'')^3 + (q - q'')(p - p'')^2 + 2p(pq'' - qp'')] &= 0,000000(\bar{8},4263447), \\
(m'', m)_{10} [2hh''(q - q'') + (hl'' + h''l)p'' - 2lh''p] &= 0,000000(\bar{7},7990172), \\
(m'', m)_{11} [2hh''(q - q'') + (hl'' + h''l)p'' - 2lh''p] &= 0,000000(\bar{7},8002421), \\
(m'', m)_{12} [2hh''(q - q'') + (hl'' + h''l)p'' - 2lh''p] &= -0,000000(\bar{9},6000758), \\
\frac{1}{2}(m'', m)(q - q'')(l''^2 + h''^2 + 3p''^2 + 3q''^2) &= 0,000000(\bar{8},4022408).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка $= 0,000000$.

Юпитеръ и Венера.

$$\begin{aligned}
(m^{IV}m')(q' - q^{IV}) &= 0,000077 (\bar{5},8863919), \\
\frac{1}{2}(m^{IV}m')[2(q'q^{IV} + p'p^{IV})(q' - q^{IV}) - q'((q' - q^{IV})^2 + (p' - p^{IV})^2) - 3q^{IV}(q'^2 - q^{IV2}) - 3p^{IV}(q'p' - q^{IV}p^{IV})] \\
&= -0,000000 (\bar{8},9136741), \\
(m^{IV}m')_1(q' - q^{IV})[l^{IV2} + h^{IV2} + l'^2 + h'^2] &= -0,000000 (\bar{9},7396518), \\
(m^{IV}m')_4(q' - q^{IV})[l^{IV2} + h^{IV2} + l'^2 + h'^2] &= 0,000000 (\bar{7},4649134), \\
(m^{IV}m')_2[(l'^2 - h'^2)(q' - q^{IV}) + 2l'h'(p' - p^{IV})] &= 0,000000 (\bar{9},2662284), \\
\overline{(m^{IV}m')} &= 0,000925 (\bar{4},9662503), \\
\overline{(m^{IV}m')}[(l'^2 - h'^2)(q' - q^{IV}) + 2l'h'(p' - p^{IV})] &= 0,000000 (\bar{9},2142236), \\
(m^{IV}m')_{13}[(l^{IV2} - h^{IV2})(q' - q^{IV}) + 2l^{IV}h^{IV}(p' - p^{IV})] &= -0,000000 (\bar{7},3503205), \\
(m^{IV}m')_{14}[(l^{IV2} - h^{IV2})(q' - q^{IV}) + 2l^{IV}h^{IV}(p' - p^{IV})] &= 0,000000 (\bar{7},7230085), \\
2(m^{IV}m')_{15}[(l'l^{IV} + h'h^{IV})(q' - q^{IV}) - (h'l^{IV} - h^{IV}l')p'] &= 0,000000 (\bar{7},7628742), \\
2(m^{IV}m')_{16}[(l'l^{IV} + h'h^{IV})(q' - q^{IV}) - (h'l^{IV} - h^{IV}l')p'] &= -0,000000 (\bar{7},7897371), \\
\frac{1}{3}(m^{IV}m')_4[(q' - q^{IV})^3 + (q' - q^{IV})(p' - p^{IV})^2 - p'(p'q^{IV} - q'p^{IV})] &= 0,000000 (\bar{7},1183252), \\
(m^{IV}m')_1[(q' - q^{IV})^3 + (q' - q^{IV})(p' - p^{IV})^2 - p'(p'q^{IV} - q'p^{IV})] &= -0,000000 (\bar{9},8701849), \\
\overline{(m^{IV}m')_1} &= -0,001001 (\bar{3},0004659) \\
\overline{(m^{IV}m')_1}[(q' - q^{IV})^3 + (q' - q^{IV})(p' - p^{IV})^2 + 2p'(p'q^{IV} - q'p^{IV})] &= 0,000000 (\bar{8},5200314), \\
\frac{1}{6}(m^{IV}m')_4[(q' - q^{IV})^3 + (q' - q^{IV})(p' - p^{IV})^2 + 2p'(p'q^{IV} - q'p^{IV})] &= -0,000000 (\bar{8},5572642), \\
(m^{IV}m')_{10}[2h'h^{IV}(q' - q^{IV}) + (h'l^{IV} + h^{IV}l')p^{IV} - 2l'h^{IV}p'] &= 0,000000 (\bar{7},3281757), \\
(m^{IV}m')_{11}[2h'h^{IV}(q' - q^{IV}) + (h'l^{IV} + h^{IV}l')p^{IV} - 2l'h^{IV}p'] &= 0,000000 (\bar{7},3848259), \\
(m^{IV}m')_{12}[2h'h^{IV}(q' - q^{IV}) + (h'l^{IV} + h^{IV}l')p^{IV} - 2l'h^{IV}p'] &= -0,000000 (\bar{9},7066955), \\
\frac{1}{2}(m^{IV}m')(q' - q^{IV})[l^{IV2} + h^{IV2} + 3p^{IV2} + 3q^{IV2}] &= 0,000000 (\bar{7},1565931).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Юпитеръ и Земля.

$$\begin{aligned}
(m^{IV}m'')(q'' - q^{IV}) &= 0,000030 (\bar{5},4827712), \\
\frac{1}{2}(m^{IV}m'')[2(q^{IV}q'' + p^{IV}p'')(q'' - q^{IV}) - q''((q'' - q^{IV})^2 + (p'' - p^{IV})^2) - 3q^{IV}(q''^2 - q^{IV2}) - 3p^{IV}(q''p'' - q^{IV}p^{IV})] \\
&= -0,000000 (\bar{8},3800823), \\
(m^{IV}m'')_1(l'^2 + h'^2 + l^{IV2} + h^{IV2})(q'' - q^{IV}) &= -0,000000 (\bar{9},6743362),
\end{aligned}$$

$$\begin{aligned}
(m^{IV}m'')_4(l''^2 + h''^2 + h^{IV2} + l^{IV2})(q'' - q^{IV}) &= 0,000000(\bar{7},1285864), \\
(m^{IV}m'')_2[(l''^2 - h''^2)(q'' - q^{IV}) + 2l''h''(p'' - p^{IV})] &= -0,000000(\bar{9},4440302), \\
\overline{(m^{IV}m'')} &= 0,001831(\bar{3},2627292), \\
\overline{(m^{IV}m'')}[(l''^2 - h''^2)(q'' - q^{IV}) + 2l^{IV}h^{IV}(p'' - p^{IV})] &= 0,000000(\bar{9},3346112), \\
(m^{IV}m'')_{13}[(l^{IV2} - h^{IV2})(q'' - q^{IV}) + 2l^{IV}h^{IV}(p'' - p^{IV})] &= 0,000000(\bar{8},9630805), \\
(m^{IV}m'')_{14}[(l^{IV2} - h^{IV2})(q'' - q^{IV}) + 2l^{IV}h^{IV}(p'' - p^{IV})] &= -0,000000(\bar{7},3399620), \\
2(m^{IV}m'')_{15}[(l''l^{IV} + h''h^{IV})(q'' - q^{IV}) - (h''l^{IV} - h^{IV}l'')p''] &= -0,000000(\bar{9},5604777), \\
2(m^{IV}m'')_{16}[(l''l^{IV} + h''h^{IV})(q'' - q^{IV}) - (h''l^{IV} - h^{IV}l'')p''] &= 0,000000(\bar{9},6129368), \\
\frac{1}{3}(m^{IV}m'')_4[(q'' - q^{IV})^3 + (q'' - q^{IV})(p'' - p^{IV})^2 - p''(p''q^{IV} - q''p^{IV})] &= 0,000000(\bar{9},9575288), \\
(m^{IV}m'')_1[(q'' - q^{IV})^3 + (q'' - q^{IV})(p'' - p^{IV})^2 - p''(p''q^{IV} - q''p^{IV})] &= -0,000000(\bar{10},9803999), \\
\overline{(m^{IV}m'')}_1 &= -0,002169(\bar{3},3363054), \\
\overline{(m^{IV}m'')}_1[(q'' - q^{IV})^3 + (q'' - q^{IV})(p'' - p^{IV})^2 + 2p''(p''q^{IV} - q''p^{IV})] &= -0,000000(\bar{9},5843747), \\
\frac{1}{6}(m^{IV}m'')_4[(q'' - q^{IV})^3 + (q'' - q^{IV})(p'' - p^{IV})^2 + 2p''(p''q^{IV} - q''p^{IV})] &= 0,000000(\bar{9},6564988), \\
(m^{IV}m'')_{10}[2h''h^{IV}(q'' - q^{IV}) + (h''l^{IV} + h^{IV}l'')p^{IV} - 2l''h^{IV}p''] &= 0,000000(\bar{7},7257973), \\
(m^{IV}m'')_{11}[2h''h^{IV}(q'' - q^{IV}) + (h''l^{IV} + h^{IV}l'')p^{IV} - 2l''h^{IV}p''] &= 0,000000(\bar{7},8340968), \\
(m^{IV}m'')_{12}[2h''h^{IV}(q'' - q^{IV}) + (h''l^{IV} + h^{IV}l'')p^{IV} - 2l''h^{IV}p''] &= -0,000000(\bar{8},4236023), \\
\frac{1}{2}(m^{IV}m'')(q' - q^{IV})(l^{IV2} + h^{IV2} + 3p^{IV2} + 3q^{IV2}) &= 0,000000(\bar{8},7529724).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Юпитеръ и Марсъ.

$$\begin{aligned}
(m^{IV}m''')(q''' - q^{IV}) &= 0,000077(\bar{5},8894553), \\
\frac{1}{2}(m^{IV}m''')[2(q'''q^{IV} + p'''p^{IV})(q''' - q^{IV}) - q'''((q''' - q^{IV})^2 + (p''' - p^{IV})^2) - 3q^{IV}(q'''^2 - q^{IV2}) - 3p^{IV}(q'''p''' - q^{IV}p^{IV})] &= 0,000000(\bar{8},3827964), \\
(m^{IV}m''')_1[l^{IV2} + h^{IV2} + l'''^2 + h'''^2](q''' - q^{IV}) &= -0,000000(\bar{7},1184971), \\
(m^{IV}m''')_4[l^{IV2} + h^{IV2} + l'''^2 + h'''^2](q''' - q^{IV}) &= 0,000002(\bar{6},2349102), \\
(m^{IV}m''')_2[(l'''^2 - h'''^2)(q''' - q^{IV}) + 2l'''h'''(p''' - p^{IV})] &= -0,000000(\bar{8},9970919), \\
\overline{(m^{IV}m''')} &= 0,000383(\bar{4},5830197), \\
\overline{(m^{IV}m''')}[(l'''^2 - h'''^2)(q''' - q^{IV}) + 2l'''h'''(p''' - p^{IV})] &= 0,000000(\bar{8},6413324), \\
(m^{IV}m''')_{13}[(l^{IV2} - h^{IV2})(q''' - q^{IV}) + 2l^{IV}h^{IV}(p''' - p^{IV})] &= -0,000000(\bar{7},3520797), \\
(m^{IV}m''')_{14}[(l^{IV2} - h^{IV2})(q''' - q^{IV}) + 2l^{IV}h^{IV}(p''' - p^{IV})] &= 0,000000(\bar{7},5602022).
\end{aligned}$$

$$\begin{aligned}
2(m^{IV}m''')_{15}[(l''l^{IV}+h''h^{IV})(q'''-q^{IV})-(h''l^{IV}-h^{IV}l'')p'''] &= -0,000002(\bar{6},2162506), \\
2(m^{IV}m''')_{16}[(l''l^{IV}+h''h^{IV})(q'''-q^{IV})-(h''l^{IV}-h^{IV}l'')p'''] &= 0,000002(\bar{6},3458451), \\
\frac{1}{3}(m^{IV}m''')_4[(q'''-q^{IV})^3+(q'''-q^{IV})(p'''-p^{IV})^2-p'''(p'''q^{IV}-q'''p^{IV})] &= 0,000000(\bar{8},7864747), \\
(m^{IV}m''')_1[(q'''-q^{IV})^3+(q'''-q^{IV})(p'''-p^{IV})^2-p'''(p'''q^{IV}-q'''p^{IV})] &= -0,000000(\bar{8},1471829), \\
\overline{(m^{IV}m''')}_1 &= -0,000696(\bar{4},8424571), \\
\overline{(m^{IV}m''')}_1[(q'''-q^{IV})^3+(q'''-q^{IV})(p'''-p^{IV})^2+2p'''(p'''q^{IV}-q'''p^{IV})] &= 0,000000(\bar{9},9143391), \\
\frac{1}{6}(m^{IV}m''')_4[(q'''-q^{IV})^3+(q'''-q^{IV})(p'''-p^{IV})^2+2p'''(p'''q^{IV}-q'''p^{IV})] &= -0,000000(\bar{8},0889794), \\
(m^{IV}m''')_{10}[2h''h^{IV}(q'''-q^{IV})+(h''l^{IV}+h^{IV}l'')p^{IV}-2l''h^{IV}p'''] &= -0,000000(\bar{7},7095255), \\
(m^{IV}m''')_{11}[2h''h^{IV}(q'''-q^{IV})+(h''l^{IV}+h^{IV}l'')p^{IV}-2l''h^{IV}p'''] &= -0,000000(\bar{7},9615526), \\
(m^{IV}m''')_{12}[2h''h^{IV}(q'''-q^{IV})+(h''l^{IV}+h^{IV}l'')p^{IV}-2l''h^{IV}p'''] &= 0,000000(\bar{8},8807742), \\
\frac{1}{2}(m^{IV}m''')(q'''-q^{IV})(l^{IV2}+h^{IV2}+3p^{IV2}+3q^{IV2}) &= 0,000000(\bar{7},1596565).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000002$.

Юпитеръ и Сатурнъ.

$$\begin{aligned}
(m^{IV}m^V)(q^V-q^{IV}) &= -0,095152(\bar{2},9784218), \\
\frac{1}{2}(m^{IV}m^V)[2(q^{IV}q^V+p^{IV}p^V)(q^V-q^{IV})-q^V((q^V-q^{IV})^2+(p^V-p^{IV})^2)-3q^{IV}(q^Vq^{IV}-q^{IV}p^{IV})-3p^{IV}(q^Vp^V-q^{IV}p^{IV})] &= 0,000083(\bar{5},9190766), \\
(m^{IV}m^V)_1[l^{V2}+h^{V2}+l^{IV2}+h^{IV2}](q^V-q^{IV}) &= 0,000471(\bar{4},6728749), \\
(m^{IV}m^V)_4[l^{V2}+h^{V2}+l^{IV2}+h^{IV2}](q^V-q^{IV}) &= -0,002298(\bar{3},3614097), \\
(m^{IV}m^V)_2[(l^{V2}-h^{V2})(q^V-q^{IV})+2l^Vh^V(p^V-p^{IV})] &= -0,000153(\bar{4},1850069), \\
\overline{(m^{IV}m^V)} &= \frac{3m^Vn^{IV}\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4}b_{-1}^{(0)} = -4,525875(0,6557026), \\
\overline{(m^{IV}m^V)}[(l^{V2}-h^{V2})(q^V-q^{IV})+2l^Vh^V(p^V-p^{IV})] &= -0,000192(\bar{4},2824535), \\
(m^{IV}m^V)_{13}[(l^{IV2}-h^{IV2})(q^V-q^{IV})+2l^{IV}h^{IV}(p^V-p^{IV})] &= 0,000127(\bar{4},1030681), \\
(m^{IV}m^V)_{14}[(l^{IV2}-h^{IV2})(q^V-q^{IV})+2h^{IV}l^{IV}(p^V-p^{IV})] &= -0,000341(\bar{4},5324546), \\
2(m^{IV}m^V)_{15}[(l^Vl^{IV}+h^Vh^{IV})(q^V-q^{IV})-(h^Vl^{IV}-h^{IV}l^V)p^V] &= 0,001096(\bar{3},0400350), \\
2(m^{IV}m^V)_{16}[(l^Vl^{IV}+h^Vh^{IV})(q^V-q^{IV})-(h^Vl^{IV}-h^{IV}l^V)p^V] &= -0,004848(\bar{3},6856138), \\
\frac{1}{3}(m^{IV}m^V)_4[(q^V-q^{IV})^3+(q^V-q^{IV})(p^V-p^{IV})^2-p^V(p^Vq^{IV}-q^Vp^{IV})] &= -0,000169(\bar{4},2288238), \\
(m^{IV}m^V)_1[(q^V-q^{IV})^3+(q^V-q^{IV})(p^V-p^{IV})^2-p^V(p^Vq^{IV}-q^Vp^{IV})] &= 0,000104(\bar{4},0174093), \\
\overline{(m^{IV}m^V)}_1 &= \frac{3m^Vn^{IV}\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4}b_{-1}^{(1)} = -0,732253(\bar{1},8646614),
\end{aligned}$$

$$\begin{aligned}
\overline{(m^{IV}, m^{VI})}_4 [(q^{VI} - q^{IV})^3 + (q^{VI} - q^{IV})(p^{VI} - p^{IV})^2 + 2p^{VI}(p^{VI}q^{IV} - q^{VI}p^{IV})] &= -0,000009(\bar{6},9670951), \\
\frac{1}{6}\overline{(m^{IV}, m^{VI})}_4 [(q^{VI} - q^{IV})^3 + (q^{VI} - q^{IV})(p^{VI} - p^{IV})^2 + 2p^{VI}(p^{VI}q^{IV} - q^{VI}p^{IV})] &= 0,000069(\bar{5},8368236), \\
\overline{(m^{IV}, m^{VI})}_{10} [2h^{VI}h^{IV}(q^{VI} - q^{IV}) + (h^{VI}l^{IV} + h^{IV}l^{VI})p^{IV} - 2l^{VI}h^{IV}p^{VI}] &= 0,000214(\bar{4},3309267), \\
\overline{(m^{IV}, m^{VI})}_{11} [2h^{VI}h^{IV}(q^{VI} - q^{IV}) + (h^{VI}l^{IV} + h^{IV}l^{VI})p^{IV} - 2l^{VI}h^{IV}p^{VI}] &= 0,001734(\bar{3},2390761), \\
\overline{(m^{IV}, m^{VI})}_{12} [2h^{VI}h^{IV}(q^{VI} - q^{IV}) + (h^{VI}l^{IV} + h^{IV}l^{VI})p^{IV} - 2l^{VI}h^{IV}p^{VI}] &= -0,000367(\bar{4},5649227), \\
\frac{1}{2}\overline{(m^{IV}, m^{VI})}_4 (q^{VI} - q^{IV})(l^{IV2} + h^{IV2} + 3q^{IV2} + 3p^{IV2}) &= -0,000177(\bar{4},2486230).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000474.

Юпитеръ и Уранъ.

$$\begin{aligned}
\overline{(m^{IV}, m^{VI})}_4 (q^{VI} - q^{IV}) &= 0,000771(\bar{4},8868918), \\
\frac{1}{2}\overline{(m^{IV}, m^{VI})}_4 [2(q^{IV}q^{VI} + p^{IV}p^{VI})(q^{VI} - q^{IV}) - q^{VI}((q^{VI} - q^{IV})^2 + (p^{VI} - p^{IV})^2) - 3q^{IV}(q^{VI2} - q^{IV2}) - 3p^{IV}(q^{VI}p^{VI} - q^{IV}p^{IV})] &= -0,000000(\bar{7},4316046), \\
\overline{(m^{IV}, m^{VI})}_4 (q^{VI} - q^{IV}) [l^{VI2} + h^{VI2} + l^{IV2} + h^{IV2}] &= -0,000000(\bar{7},6484526), \\
\overline{(m^{IV}, m^{VI})}_4 (q^{VI} - q^{IV}) [l^{VI2} + h^{VI2} + l^{IV2} + h^{IV2}] &= 0,000007(\bar{6},8246275), \\
\overline{(m^{IV}, m^{VI})}_2 [(l^{VI2} - h^{VI2})(q^{VI} - q^{IV}) + 2l^{VI}h^{VI}(p^{VI} - p^{IV})] &= -0,000000(\bar{7},8298437), \\
\overline{(m^{IV}, m^{VI})}_4 &= \frac{3m^{IV}In^{IV}\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} = 0,015297(\bar{2},1846267), \\
\overline{(m^{IV}, m^{VI})}_2 [(l^{VI2} - h^{VI2})(q^{VI} - q^{IV}) + 2l^{VI}h^{VI}(p^{VI} - p^{IV})] &= 0,000000(\bar{7},5532854), \\
\overline{(m^{IV}, m^{VI})}_{13} [(l^{IV2} - h^{IV2})(q^{VI} - q^{IV}) + 2l^{IV}h^{IV}(p^{VI} - p^{IV})] &= -0,000000(\bar{7},8070555), \\
\overline{(m^{IV}, m^{VI})}_{14} [(l^{IV2} - h^{IV2})(q^{IV} - q^{VI}) + 2l^{IV}h^{IV}(p^{VI} - p^{IV})] &= 0,000001(\bar{6},1924222), \\
2\overline{(m^{IV}, m^{VI})}_{15} [(l^{IV}l^{VI} + h^{IV}h^{VI})(q^{VI} - q^{IV}) - (h^{VI}l^{IV} - h^{IV}l^{VI})p^{VI}] &= 0,0000010(\bar{5},0173493), \\
2\overline{(m^{IV}, m^{VI})}_{16} [(l^{IV}l^{VI} + h^{IV}h^{VI})(q^{VI} - q^{IV}) - (h^{VI}l^{IV} - h^{IV}l^{VI})p^{VI}] &= -0,000013(\bar{5},1267552), \\
\frac{1}{3}\overline{(m^{IV}, m^{VI})}_4 [(q^{VI} - q^{IV})^3 + (q^{VI} - q^{IV})(p^{VI} - p^{IV})^2 - p^{VI}(p^{VI}q^{IV} - q^{VI}p^{IV})] &= 0,000000(\bar{7},2793885), \\
\overline{(m^{IV}, m^{VI})}_4 [(q^{VI} - q^{IV})^3 + (q^{VI} - q^{IV})(p^{VI} - p^{IV})^2 - p^{VI}(p^{VI}q^{IV} - q^{VI}p^{IV})] &= -0,000000(\bar{8},5803349), \\
\overline{(m^{IV}, m^{VI})}_4 &= \frac{3m^{IV}In^{IV}\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} = -0,021926(\bar{2},3409632), \\
\overline{(m^{IV}, m^{VI})}_4 [(q^{VI} - q^{IV})^3 + (q^{VI} - q^{IV})(p^{VI} - p^{IV})^2 + 2p^{VI}(p^{VI}q^{IV} - q^{VI}p^{IV})] &= 0,000000(\bar{7},1403037), \\
\frac{1}{6}\overline{(m^{IV}, m^{VI})}_4 [(q^{VI} - q^{IV})^3 + (q^{VI} - q^{IV})(p^{VI} - p^{IV})^2 + 2p^{VI}(p^{VI}q^{IV} - q^{VI}p^{IV})] &= -0,000000(\bar{7},5289927), \\
\overline{(m^{IV}, m^{VI})}_{10} [2h^{VI}h^{IV}(q^{VI} - q^{IV}) + (h^{VI}l^{IV} + h^{IV}l^{VI})p^{IV} - 2l^{VI}h^{IV}p^{VI}] &= 0,000003(\bar{6},4817579), \\
\overline{(m^{IV}, m^{VI})}_{11} [2h^{VI}h^{IV}(q^{VI} - q^{IV}) + (h^{VI}l^{IV} + h^{IV}l^{VI})p^{IV} - 2l^{VI}h^{IV}p^{VI}] &= 0,000005(\bar{6},6977413),
\end{aligned}$$

$$(m^{IV}, m^{VI})_{12} [2h^{IV}h^{VI}(q^{VI}-q^{IV}) + (h^{VI}l^{IV} + h^{IV}l^{VI})p^{IV} - 2l^{VI}h^{IV}p^{VI}] = -0,000000(\bar{7},5590760),$$

$$\frac{1}{2}(m^{IV}, m^{VI})(q^{VI}-q^{IV})[l^{IV2} + h^{VI} + 3p^{IV2} + 3q^{IV2}] = 0,000001(\bar{6},1570930),$$

Слѣд. сумма членовъ третьяго порядка = $-0,000006$.

Сатурнъ и Меркурій.

$$(m^V, m)(q - q^V) = 0,000002(\bar{6},2664063),$$

$$\frac{1}{2}(m^V, m)[2(q^Vq + p^Vp)(q - q^V) - q(q - q^V)^2 + (p - p^V)^2 - 3q^V(q^2 - q^{V2}) - 3p^V(qp - q^Vp^V)] = -0,000000(\bar{8},0684083),$$

$$(m^V, m)_1(q - q^V)[l^2 + h^2 + l^{V2} + h^{V2}] = -0,000000(\bar{10},3179232),$$

$$(m^V, m)_4(q - q^V)[l^2 + h^2 + l^{V2} + h^{V2}] = 0,000000(\bar{7},1022544),$$

$$(m^V, m)_2[(l^2 - h^2)(q - q^V) + 2lh(p - p^V)] = 0,000000(\bar{8},0759817),$$

$$\overline{(m^V, m)} = 0,000004(\bar{6},6528900),$$

$$\overline{(m^V, m)}_2[(l^2 - h^2)(q - q^V) + 2lh(p - p^V)] = -0,000000(\bar{8},0709260),$$

$$(m^V, m)_{13}[(l^{V2} - h^{V2})(q - q^V) + 2l^Vh^V(p - p^V)] = 0,000000(\bar{9},6349535),$$

$$(m^V, m)_{14}[(l^{V2} - h^{V2})(q - q^V) + 2l^Vh^V(p - p^V)] = -0,000000(\bar{8},0033342),$$

$$2(m^V, m)_{15}[(l^Vl + hh^V)(q - q^V) - (hl^V - h^Vl)p] = -0,000000(\bar{7},7957110),$$

$$2(m^V, m)_{16}[(l^Vl + hh^V)(q - q^V) - (hl^V - h^Vl)p] = 0,000000(\bar{7},7979506),$$

$$\frac{1}{3}(m^V, m)_4[(q - q^V)^3 + (q - q^V)(p - p^V)^2 - p(pq^V - qp^V)] = 0,000000(\bar{8},1948334),$$

$$(m^V, m)_1[(q - q^V)^3 + (q - q^V)(p - p^V)^2 - p(pq^V - qp^V)] = -0,000000(\bar{11},8876235),$$

$$\overline{(m^V, m)}_1 = -0,000004(\bar{6},6565087),$$

$$\overline{(m^V, m)}_1[(q - q^V)^3 + (q - q^V)(p - p^V)^2 + 2p(pq^V - qp^V)] = -0,000000(\bar{9},2807908),$$

$$\frac{1}{6}(m^V, m)_4[(q - q^V)^3 + (q - q^V)(p - p^V)^2 + 2p(pq^V - qp^V)] = 0,000000(\bar{9},2839227),$$

$$(m^V, m)_{10}[2hh^V(q - q^V) + (hl^V + h^Vl)p^V - 2lh^Vp] = 0,000000(\bar{7},7388404),$$

$$(m^V, m)_{11}[2hh^V(q - q^V) + (hl^V + h^Vl)p^V - 2lh^Vp] = 0,000000(\bar{7},7436677),$$

$$(m^V, m)_{12}[2hh^V(q - q^V) + (hl^V + h^Vl)p^V - 2lh^Vp] = -0,000000(\bar{9},0101328),$$

$$\frac{1}{2}(m^V, m)(q - q^V)[l^{V2} + h^{V2} + h^{V2} + 3p^{V2} + 3q^{V2}] = 0,000000(\bar{9},9118728).$$

Слѣд. сумма членовъ третьяго порядка = $0,000000$.

Сатурнъ и Венера.

$$\begin{aligned}
(m', m')(q' - q'') &= -0,000015 (\bar{5}, 1803623), \\
\frac{1}{2}(m', m')[2(q'q'' + p'p'')(q' - q'') - q'((q' - q'')^2 + (p' - p'')^2) - 3q'(q'^2 - q''^2) - 3p'(q'p' - q''p'')] &= -0,000000 (\bar{8}, 2662200), \\
(m', m')_1(q' - q'')[l'^2 + h'^2 + l''^2 + h''^2] &= -0,000000 (\bar{10}, 6262823), \\
(m', m')_4(q' - q'')[l'^2 + h'^2 + l''^2 + h''^2] &= 0,000000 (\bar{8}, 8700257), \\
(m', m')_2[(l'^2 - h'^2)(q' - q'') + 2l'h'(p' - p'')] &= 0,000000 (\bar{10}, 1166479), \\
\overline{(m', m')} &= 0,000116 (\bar{4}, 0647796), \\
\overline{(m', m')}[(l'^2 - h'^2)(q' - q'') + 2l'h'(p' - p'')] &= -0,000000 (\bar{10}, 1022034), \\
(m', m')_{13}[(l'^2 - h'^2)(q' - q'') + 2l'h'(p' - p'')] &= 0,000000 (\bar{8}, 5511470), \\
(m', m')_{14}[(l'^2 - h'^2)(q' - q'') + 2l'h'(p' - p'')] &= -0,000000 (\bar{8}, 8705320), \\
2(m', m')_{15}[(l'l'' + h'h'')(q' - q'') - (h'l' - h''l')p'] &= 0,000000 (\bar{8}, 4641780), \\
2(m', m')_{16}[(l'l'' + h'h'')(q' - q'') - (h'l' - h''l')p''] &= -0,000000 (\bar{8}, 4719840), \\
\frac{1}{3}(m', m')_4[(q' - q'')^3 + (q' - q'')(p' - p'')^2 - p'(p'q' - q''p'')] &= 0,000000 (\bar{8}, 4997818), \\
(m', m')_1[(q' - q'')^3 + (q' - q'')(p' - p'')^2 - p'(p'q' - q''p'')] &= -0,000000 (\bar{10}, 7331597), \\
\overline{(m', m')_1} &= -0,001186 (\bar{3}, 0741402), \\
\overline{(m', m')_1}[(q' - q'')^3 + (q' - q'')(p' - p'')^2 + 2p'(p'q' - q''p'')] &= 0,000000 (\bar{7}, 2108925), \\
\frac{1}{6}(m', m')_4[(q' - q'')^3 + (q' - q'')(p' - p'')^2 + 2p'(p'q' - q''p'')] &= -0,000000 (\bar{8}, 2218615), \\
(m', m')_{10}[2h'h''(q' - q'') + (h'l' + h''l')p' - 2l'h'p] &= 0,000000 (\bar{8}, 9856463), \\
(m', m')_{11}[2h'h''(q' - q'') + (h'l' + h''l')p' - 2l'h'p'] &= 0,000000 (\bar{7}, 0025014), \\
(m', m')_{12}[2h'h''(q' - q'') + (h'l' + h''l')p' - 2l'h'p'] &= -0,000000 (\bar{10}, 8086778), \\
\frac{1}{2}(m', m')(q' - q'')[l'^2 + h'^2 + 3p'^2 + 3q'^2] &= 0,000000 (\bar{8}, 8258288).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Сатурнъ и Земля.

$$\begin{aligned}
(m', m'')(q'' - q'') &= 0,000017 (\bar{5}, 2242211), \\
\frac{1}{2}(m', m'')[2(q''q'' + p''p'')(q'' - q'') - q''((q'' - q'')^2 + (p'' - p'')^2) - 3q''(q''^2 - q'^2) - 3p''(q''p'' - q'p'')] &= -0,000000 (\bar{8}, 5360315), \\
(m', m'')_1(q'' - q'')[l''^2 + h''^2 + l'^2 + h'^2] &= -0,000000 (\bar{9}, 9868075),
\end{aligned}$$

$$\begin{aligned}
 (m', m'')_4 (q'' - q') [l'^2 + h'^2 + l'^2 + h'^2] &= 0,000000 (\bar{8}, 9523366), \\
 (m', m'')_2 [(l'^2 - h'^2) (q'' - q') + 2l'h'' (p'' - p')] &= 0,000000 (\bar{10}, 2151744), \\
 \overline{(m', m'')} &= 0,000244 (\bar{4}, 3874990), \\
 \overline{(m', m'')} [(l'^2 - h'^2) (q'' - q') + 2l'h'' (p'' - p')] &= -0,000000 (\bar{10}, 1868395), \\
 (m', m'')_{13} [(l'^2 - h'^2) (q'' - q') + 2l'h'' (p'' - p')] &= 0,000000 (\bar{8}, 6370920), \\
 (m', m'')_{14} [(l'^2 - h'^2) (q'' - q') + 2l'h'' (p'' - p')] &= -0,000000 (\bar{7}, 0077528), \\
 2(m', m'')_{15} [(l'l'' + h'h'') (q'' - q') - (h'l'' - h'l'') p''] &= -0,000000 (\bar{7}, 1720978), \\
 2(m', m'')_{16} [l'l'' + h'h'' (q'' - q') - (h'l'' - h'l'') p''] &= 0,000000 (\bar{7}, 1872139), \\
 \frac{1}{3} (m', m'')_4 [(q'' - q')^3 + (q'' - q') (p'' - p')^2 - p'' (p'' q' - q' p')] &= 0,000000 (\bar{8}, 2171419), \\
 (m', m'')_4 [(q'' - q')^3 + (q'' - q') (p'' - p')^2 - p'' (p'' q' - q' p')] &= -0,000000 (\bar{9}, 7287341), \\
 \overline{(m', m')} &= -0,000255 (\bar{4}, 4059690), \\
 \overline{(m', m')} [(q'' - q')^3 + (q'' - q') (p'' - p')^2 + 2p'' (p'' q' - q' p')] &= -0,000000 (\bar{9}, 8950698), \\
 \frac{1}{6} (m', m'')_4 [(q'' - q')^3 + (q'' - q') (p'' - p')^2 + 2p'' (p'' q' - q' p')] &= 0,000000 (\bar{9}, 9161119), \\
 (m', m'')_{10} [2h'h'' (q'' - q') + (h'l'' + h'l'') p' - 2l'h'' p''] &= 0,000000 (\bar{7}, 1970371), \\
 (m', m'')_{11} [2h'h'' (q'' - q') + (h'l'' + h'l'') p' - 2l'h'' p''] &= 0,000000 (\bar{7}, 2292493), \\
 (m', m'')_{12} [2h'h'' (q'' - q') + (h'l'' + h'l'') p' - 2l'h'' p''] &= -0,000000 (\bar{9}, 2675439), \\
 \frac{1}{2} (m', m'') (q'' - q') [l'^2 + h'^2 + 3p'^2 + 3q'^2] &= 0,000000 (\bar{8}, 8696876).
 \end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Сатурнъ и Марсъ.

$$\begin{aligned}
 (m', m''') (q''' - q') &= 0,000012 (\bar{5}, 0966946), \\
 \frac{1}{2} (m', m''') [2(q''' q' + p''' p') (q''' - q') - q''' ((q''' - q')^2 + (p''' - p')^2) - 3q' (q'''^2 - q'^2) - 3p' (q''' p''' - q' p')] &= -0,000000 (\bar{8}, 3056734), \\
 (m', m''')_4 [l'''^2 + h'''^2 + l'^2 + h'^2] (q''' - q') &= -0,000000 (\bar{9}, 7754625), \\
 (m', m''')_4 [l'''^2 + h'''^2 + l'^2 + h'^2] (q''' - q') &= 0,000000 (\bar{7}, 3837603), \\
 (m', m''')_2 [(l'''^2 - h'''^2) (q''' - q') + 2l''' h''' (p''' - p')] &= -0,000000 (\bar{8}, 4118143), \\
 \overline{(m', m''')} &= 0,000072 (\bar{5}, 8571347), \\
 \overline{(m', m''')} [(l'''^2 - h'''^2) (q''' - q') + 2l''' h''' (p''' - p')] &= 0,000000 (\bar{8}, 3408789), \\
 (m', m''')_{13} [(l'^2 - h'^2) (q''' - q') + 2l'h'' (p''' - p')] &= 0,000000 (\bar{8}, 4946818),
 \end{aligned}$$

$$\begin{aligned}
(m^V, m''')_{14} [(l^{V2} - h^{V2})(q''' - q^V) + 2l^V h^V (p''' - p^V)] &= -0,000000 (\bar{8}, 8688449), \\
2(m^V, m''')_{15} [(l''' l^V + h''' h^V)(q''' - q^V) - (h''' l^V - h^V l''') p'''] &= -0,000000 (\bar{8}, 6777076), \\
2(m^V, m''')_{16} [(l''' l^V + h''' h^V)(q''' - q^V) - (h''' l^V - h^V l''') p'''] &= 0,000000 (\bar{8}, 7134318), \\
\frac{1}{3}(m^V, m''')_4 [(q''' - q^V)^3 + (q''' - q^V)(p''' - p^V)^2 - p'''(p''' q^V - q''' p^V)] &= 0,000000 (\bar{8}, 2321873), \\
(m^V, m''')_1 [(q''' - q^V)^3 + (q''' - q^V)(p''' - p^V)^2 - p'''(p''' q^V - q''' p^V)] &= -0,000000 (\bar{9}, 1010108), \\
\overline{(m^V, m''')}_1 &= -0,000080 (\bar{5}, 9041474), \\
\overline{(m^V, m''')}_1 [(q''' - q^V)^3 + (q''' - q^V)(p''' - p^V)^2 + 2p'''(p''' q^V - q''' p^V)] &= 0,000000 (\bar{10}, 4884786), \\
\frac{1}{6}(m^V, m''')_4 [(q''' - q^V)^3 + (q''' - q^V)(p''' - p^V)^2 + 2p'''(p''' q^V - q''' p^V)] &= -0,000000 (\bar{10}, 5378563), \\
(m^V, m''')_{10} [2h''' h^V (q''' - q^V) + (h''' l^V + h^V l''') p^V - 2l''' h^V p'''] &= -0,000000 (\bar{7}, 4616422), \\
(m^V, m''')_{11} [2h''' h^V (q''' - p^V) + (h''' l^V + h^V l''') p^V - 2l''' h^V p'''] &= -0,000000 (\bar{7}, 5364280), \\
(m^V, m'')_{12} [2h''' h^V (q''' - q^V) + (h''' l^V + h^V l''') p^V - 2l''' h^V p'''] &= 0,000000 (\bar{9}, 9740460), \\
\frac{1}{2}(m^V, m''')(q''' - q^V)(l^{V2} + h^{V2} + 3p^{V2} + 3q^{V2}) &= 0,000000 (\bar{8}, 7421611).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,000000.

Сатурнъ и Юпитеръ.

$$\begin{aligned}
(m^V, m^{IV})(q^{IV} - q^V) &= 0,235048 (\bar{4}, 3711574), \\
\frac{1}{2}(m^V, m^{IV})[2(q^V q^{IV} + p^V p^{IV})(q^{IV} - q^V) - q^{IV}((q^{IV} - q^V)^2 + (p^{IV} - p^V)^2) - 3q^V(q^{IV2} - q^{V2}) - 3p^V(q^{IV} p^{IV} - q^V p^V)] &= -0,000512 (\bar{4}, 7089411), \\
(m^V, m^{IV})_1 [l^{IV2} + h^{IV2} + l^{V2} + h^{V2}](q^{IV} - q^V) &= -0,001163 (\bar{3}, 0656106), \\
(m^V, m^{IV})_4 [l^{IV2} + h^{IV2} + l^{V2} + h^{V2}](q^{IV} - q^V) &= 0,005677 (\bar{3}, 7541453), \\
(m^V, m^{IV})_2 [(l^{IV2} - h^{IV2})(q^{IV} - q^V) + 2l^{IV} h^{IV}(p^{IV} - p^V)] &= -0,000109 (\bar{4}, 0959252), \\
\overline{(m^V, m^{IV})} &= -11,179905 (1, 0484382), \\
\overline{(m^V, m^{IV})} [(l^{IV2} - h^{IV2})(q^{IV} - q^V) + 2l^{IV} h^{IV}(p^{IV} - p^V)] &= -0,000136 (\bar{4}, 1333718), \\
(m^V, m^{IV})_{13} [(l^{V2} - h^{V2})(q^{IV} - q^V) + 2l^V h^V(p^{IV} - p^V)] &= 0,001090 (\bar{3}, 0376210), \\
(m^V, m^{IV})_{14} [(l^{V2} - h^{V2})(q^{IV} - q^V) + 2h^V l^V(p^{IV} - p^V)] &= -0,002931 (\bar{3}, 4670075), \\
2(m^V, m^{IV})_{15} [(l^V l^{IV} + h^V h^{IV})(q^{IV} - q^V) - (h^{IV} l^V - h^V l^{IV}) p^{IV}] &= -0,001597 (\bar{3}, 2034735), \\
2(m^V, m^{IV})_{16} [(l^V l^{IV} + h^V h^{IV})(q^{IV} - q^V) - (h^{IV} l^V - h^V l^{IV}) p^V] &= 0,007064 (\bar{3}, 8490523), \\
\frac{1}{3}(m^V, m^{IV})_4 [(q^{IV} - q^V)^3 + (q^{IV} - q^V)(p^{IV} - p^V)^2 - p^{IV}(p^{IV} q^V - q^{IV} p^V)] &= 0,000324 (\bar{4}, 5109409), \\
(m^V, m^{IV})_1 [(q^{IV} - q^V)^3 + (q^{IV} - q^V)(p^{IV} - p^V)^2 - p^{IV}(p^{IV} q^V - q^{IV} p^V)] &= -0,000199 (\bar{4}, 2995275), \\
\overline{(m^V, m^{IV})}_1 &= -1,808827 (0, 2573970),
\end{aligned}$$

$$\begin{aligned}
\overline{(m', m'')}_1 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 + 2p''(p''q' - q''p')] &= 0,000010 (\bar{5}, 0079054), \\
\frac{1}{6} \overline{(m', m'')}_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 + 2p''(p''q' - q''p')] &= -0,000075 (\bar{5}, 8776339), \\
\overline{(m', m'')}_{10} [2h''h'(q'' - q') + (h''l' + h'l'')p' - 2l''h'p''] &= 0,000006 (\bar{6}, 766515), \\
\overline{(m', m'')}_{11} [2h''h'(q'' - q') + (h''l' + h'l'')p' - 2l''h'p''] &= 0,000047 (\bar{5}, 6738009), \\
\overline{(m', m'')}_{12} [2h''h'(q'' - q') + (h''l' + h'l'')p' - 2l''h'p''] &= -0,000009 (\bar{6}, 9996475), \\
\frac{1}{2} \overline{(m', m'')}_1 (q'' - q')(l'^2 + h'^2 + 3q'^2 + 3p'^2) &= 0,001039 (\bar{3}, 0166239).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,004114$.

Сатурнъ и Уранъ.

$$\begin{aligned}
\overline{(m', m'')}_1 (q'' - q') &= 0,007823 (\bar{3}, 8933592), \\
\frac{1}{2} \overline{(m', m'')}_1 [2(q'q'' + p'p'')(q'' - q') - q''((q'' - q')^2 + (p'' - p')^2) - 3q'(q''^2 - q'^2) - 3p'(q''p' - q'p')] &= -0,000016 (\bar{5}, 2109683), \\
\overline{(m', m'')}_1 (l''^2 + h''^2 + l'^2 + h'^2)(q'' - q') &= -0,000027 (\bar{5}, 4356877), \\
\overline{(m', m'')}_4 (l''^2 + h''^2 + l'^2 + h'^2)(q'' - q') &= 0,000151 (\bar{4}, 1790445), \\
\overline{(m', m'')}_2 [(l''^2 - h''^2)(q'' - q') + 2l''h''(p'' - p')] &= -0,000010 (\bar{5}, 0166218), \\
\overline{(m', m'')}_1 = \frac{3m''n''\alpha^3(1-7\alpha^2)}{32(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(0)} &= -0,136976 (\bar{1}, 1366452), \\
\overline{(m', m'')}_1 [(l''^2 - h''^2)(q'' - q') + 2l''h''(p'' - p')] &= -0,000009 (\bar{6}, 9496922), \\
\overline{(m', m'')}_{13} [(l'^2 - h'^2)(q'' - q') + 2l'h'(p'' - p')] &= 0,000032 (\bar{5}, 5031744), \\
\overline{(m', m'')}_{14} [(l'^2 - h'^2)(q'' - q') + 2l'h'(p'' - p')] &= -0,000084 (\bar{5}, 9239174), \\
2 \overline{(m', m'')}_{15} [(l'l'' + h'h'')(q'' - q') - (h'l' - h'l'')p''] &= -0,000005 (\bar{6}, 6756934), \\
2 \overline{(m', m'')}_{16} [(l'l'' + h'h'')(q'' - q') - (h'l' - h'l'')p''] &= 0,000014 (\bar{5}, 1559489), \\
\frac{1}{3} \overline{(m', m'')}_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 - p''(p''q' - q''p')] &= 0,000013 (\bar{5}, 1215702), \\
\overline{(m', m'')}_1 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 - p''(p''q' - q''p')] &= -0,000007 (\bar{6}, 8553347), \\
\overline{(m', m'')}_1 = \frac{3m''n''\alpha^2(1-3\alpha^2+\alpha^4)}{16(1-\alpha^2)^4} b_{-\frac{1}{2}}^{(1)} &= -0,054509 (\bar{2}, 7364681), \\
\overline{(m', m'')}_1 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 + 2p''(p''q' - q''p')] &= -0,000000 (\bar{7}, 8813535), \\
\frac{1}{6} \overline{(m', m'')}_4 [(q'' - q')^3 + (q'' - q')(p'' - p')^2 + 2p''(p''q' - q''p')] &= 0,000003 (\bar{5}, 5136392), \\
\overline{(m', m'')}_{10} [2h''h'(q'' - q') + (h''l' + h'l'')p' - 2l''h'p''] &= 0,000006 (\bar{6}, 2727459),
\end{aligned}$$

$$\begin{aligned}
(m', m'')_{11} [2h' h'' (q'' - q') + (h' l'' + h'' l') p' - 2l'' h' p''] &= 0,000033 (\bar{5}, 5177890), \\
(m', m'')_{12} [2h' h'' (q'' - q') + (h' l'' + h'' l') p' - 2l'' h' p''] &= -0,000006 (\bar{6}, 7923726), \\
\frac{1}{2} (m', m'') (q'' - q') (l'^2 + h'^2 + 3p'^2 + 3q'^2) &= 0,000034 (\bar{5}, 5388257),
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000192$.

Уранъ и Меркурій.

$$\begin{aligned}
(m', m) (q - q'') &= 0,0000000 (\bar{7}, 1071217), \\
\frac{1}{2} (m', m) [2(q'' q + p'' p) (q - q'') - q(q - q'')^2 + (p - p'')^2 - 3q''(q^2 - q'')^2 - 3p''(qp - q'' p'')] &= -0,000000 (\bar{10}, 9696364), \\
(m', m)_1 [(l^2 + h^2 + l''^2 + h''^2)] (q - q'') &= -0,000000 (\bar{12}, 5412617), \\
(m', m)_4 [l^2 + h^2 + l''^2 + h''^2] (q - q'') &= 0,000000 (\bar{9}, 9316821), \\
(m', m)_2 [(l^2 - h^2) (q - q'') + 2lh(p - p'')] &= 0,000000 (\bar{9}, 0377211), \\
\overline{(m', m)} &= 0,000000 (\bar{7}, 5934461), \\
\overline{(m', m)} [(l^2 - h^2) (q - q'') + 2lh(p - p'')] &= -0,000000 (\bar{9}, 0367247), \\
(m', m)_{13} [(l''^2 - h''^2) (q - q'') + 2l'' h'' (p - p'')] &= -0,000000 (\bar{10}, 0316765), \\
(m', m)_{14} [(l''^2 - h''^2) (q - q'') + 2l'' h'' (p - p'')] &= 0,000000 (\bar{10}, 3995051), \\
2(m', m)_{15} [(l'' l + h'' h) (q - q'') - (h l'' - h'' l) p] &= -0,000000 (\bar{8}, 7953783), \\
2(m', m)_{16} [(l'' l + h'' h) (q - q'') - (h l'' - h'' l) p] &= 0,000000 (\bar{8}, 7959278), \\
\frac{1}{3} (m', m)_4 [(q - q'')^3 + (q - q'') (p - p'')^2 - p(p q'' - q p'')] &= 0,000000 (\bar{10}, 9248293), \\
(m', m)_1 [(q - q'')^3 + (q - q'') (p - p'')^2 - p(p q'' - q p'')] &= -0,000000 (\bar{12}, 0115302), \\
\overline{(m', m)}_1 &= -0,000000 (\bar{7}, 5940886), \\
\overline{(m', m)}_4 [(q - q'')^3 + (q - q'') (p - p'')^2 + 2p(p q'' - q p'')] &= -0,000000 (\bar{10}, 5331583), \\
\frac{1}{6} (m', m)_4 [(q - q'')^3 + (q - q'') (p - p'')^2 + 2p(p q'' - q p'')] &= 0,000000 (\bar{10}, 5339319), \\
(m', m)_{10} [2h h'' (q - q'') + (h l'' + h'' l) p' - 2l h'' p] &= 0,000000 (\bar{9}, 7835481), \\
(m', m)_{11} [2h h'' (q - q'') + (h l'' + h'' l) p' - 2l h'' p] &= 0,000000 (\bar{9}, 7847418), \\
(m', m)_{12} [2h h'' (q - q'') + (h l'' + h'' l) p' - 2l h'' p] &= -0,000000 (\bar{12}, 4453854), \\
\frac{1}{2} (m', m) (q - q'') (l'^2 + h'^2 + 3p'^2 + 3q'^2) &= 0,000000 (\bar{10}, 2407724).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $0,000000$.

Уранъ и Венера.

$$\begin{aligned}
(m^{VI}m') (q' - q^{VI}) &= 0,000000 (\bar{7},6747412), \\
\frac{1}{2} (m^{VI}m') [2(q'q^{VI} + p'p^{VI})(q' - q^{VI}) - q'((q' - q^{VI})^2 + (p' - p^{VI})^2) - 3q^{VI}(q'^2 - q^{VI2}) - 3p^{VI}(q'p' - q^{VI}p^{VI})] \\
&= -0,000000 (\bar{9},0017110), \\
(m^{VI}m')_1 (q' - q^{VI}) [l^{VI2} + h^{VI2} + l'^2 + h'^2] &= -0,000000 (\bar{12},3511977), \\
(m^{VI}m')_4 (q' - q^{VI}) [l^{VI2} + h^{VI2} + l'^2 + h'^2] &= 0,000000 (\bar{9},1991825), \\
(m^{VI}m')_2 [(l'^2 - h'^2)(q' - q^{VI}) + 2l'h'(p' - p^{VI})] &= 0,000000 (\bar{11},3442536), \\
\overline{(m^{VI}m')} &= 0,000010 (\bar{5},0083088), \\
\overline{(m^{VI}m')} [(l'^2 - h'^2)(q' - q^{VI}) + 2l'h'(p' - p^{VI})] &= -0,000000 (\bar{11},3406473), \\
(m^{VI}m')_{13} [(l^{VI2} - h^{VI2})(q' - q^{VI}) + 2l^{VI}h^{VI}(p' - p^{VI})] &= 0,000000 (\bar{10},7434107), \\
(m^{VI}m')_{14} [(l^{VI2} - h^{VI2})(q' - q^{VI}) + 2l^{VI}h^{VI'}(p' - p^{VI})] &= -0,000000 (\bar{9},1117274), \\
2(m^{VI}m')_{15} [(l'l^{VI} + h'h^{VI})(q' - q^{VI}) - (h'l^{VI} - h^{VI}l')p'] &= -0,000000 (\bar{8},1932257), \\
2(m^{VI}m')_{16} [(l'l^{VI} + h'h^{VI})(q' - q^{VI}) - (h'l^{VI} - h^{VI}l')p'] &= 0,000000 (\bar{8},1951298), \\
\frac{1}{3} (m^{VI}m')_4 [(q' - q^{VI})^3 + (q' - q^{VI})(p' - p^{VI})^2 - p'(p'q^{VI} - q'p^{VI})] &= 0,000000 (\bar{10},6686005), \\
(m^{VI}m')_1 [(q' - q^{VI})^3 + (q' - q^{VI})(p' - p^{VI})^2 - p'(p'q^{VI} - q'p^{VI})] &= -0,000000 (\bar{12},2977370), \\
\overline{(m^{VI}m')}_1 &= -0,000009 (\bar{6},9935815) \\
\overline{(m^{VI}m')}_1 [(q' - q^{VI})^3 + (q' - q^{VI})(p' - p^{VI})^2 + 2p'(p'q^{VI} - q'p^{VI})] &= -0,000000 (\bar{10},4267110), \\
\frac{1}{6} (m^{VI}m')_4 [(q' - q^{VI})^3 + (q' - q^{VI})(p' - p^{VI})^2 + 2p'(p'q^{VI} - q'p^{VI})] &= 0,000000 (\bar{10},4463994), \\
(m^{VI}m')_{10} [2h'h^{VI}(q' - q^{VI}) + (h'l^{VI} + h^{VI}l')p^{VI} - 2l'h^{VI}p'] &= 0,000000 (\bar{9},2540200), \\
(m^{VI}m')_{11} [2h'h^{VI}(q' - q^{VI}) + (h'l^{VI} + h^{VI}l')p^{VI} - 2l'h^{VI}p'] &= 0,000000 (\bar{9},2581878), \\
(m^{VI}m')_{12} [2h'h^{VI}(q' - q^{VI}) + (h'l^{VI} + h^{VI}l')p^{VI} - 2l'h^{VI}p'] &= -0,000000 (\bar{12},4610477), \\
\frac{1}{2} (m^{VI}m') (q' - q^{VI}) [l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}] &= 0,000000 (\bar{10},8083919).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Уранъ и Земля.

$$\begin{aligned}
(m^{VI}m'') (q'' - q^{VI}) &= -0,000000 (\bar{7},5412980), \\
\frac{1}{2} (m^{VI}m'') [2(q''q^{VI} + p''p^{VI})(q'' - q^{VI}) - q''((q'' - q^{VI})^2 + (p'' - p^{VI})^2) - 3q^{VI}(q''^2 - q^{VI2}) - 3p^{VI}(q''p'' - q^{VI}p^{VI})] \\
&= 0,000000 (\bar{11},9776239), \\
(m^{VI}m'')_1 (l'^2 + h'^2 + l^{VI2} + h^{VI2})(q'' - q^{VI}) &= 0,000000 (\bar{12},5439121),
\end{aligned}$$

$$\begin{aligned}
(m^{VI}m'')_4(l''^2 + h''^2 + h^{VI2} + l^{VI2})(q'' - q^{VI}) &= -0,000000(\bar{9},1113539), \\
(m^{VI}m'')_2[(l''^2 - h''^2)(q'' - q^{VI}) + 2l'h''(p'' - p^{VI})] &= -0,000000(\bar{11},6935763), \\
\overline{(m^{VI}m'')} &= 0,000022(\bar{5},3366061), \\
\overline{(m^{VI}m'')}[(l''^2 - h''^2)(q'' - q^{VI}) + 2l'h''(p'' - p^{VI})] &= 0,000000(\bar{11},686541), \\
(m^{VI}m'')_{13}[(l^{VI2} - h^{VI2})(q'' - q^{VI}) + 2l^{VI}h^{VI}(p'' - p^{VI})] &= -0,000000(\bar{10},4308265), \\
(m^{VI}m'')_{14}[(l^{VI2} - h^{VI2})(q'' - q^{VI}) + 2l^{VI}h^{VI}(p'' - p^{VI})] &= -0,000000(\bar{10},7994697), \\
2(m^{VI}m'')_{15}[(l'l^{VI} + h'h^{VI})(q'' - q^{VI}) - (h'l^{VI} - h^{VI}l'')p''] &= 0,000000(\bar{9},2916753), \\
2(m^{VI}m'')_{16}[(l'l^{VI} + h'h^{VI})(q'' - q^{VI}) - (h'l^{VI} - h^{VI}l'')p''] &= -0,000000(\bar{9},2953744), \\
\frac{1}{3}(m^{VI}m'')_4[(q'' - q^{VI})^3 + (q'' - q^{VI})(p'' - p^{VI})^2 - p''(p''q^{VI} - q''p^{VI})] &= -0,000000(\bar{11},5060380), \\
(m^{VI}m'')_4[(q'' - q^{VI})^3 + (q'' - q^{VI})(p'' - p^{VI})^2 - p''(p''q^{VI} - q''p^{VI})] &= 0,000000(\bar{13},4157175), \\
\overline{(m^{VI}m'')}_4 &= -0,000022(\bar{5},3410520), \\
\overline{(m^{VI}m'')}_4[(q'' - q^{VI})^3 + (q'' - q^{VI})(p'' - p^{VI})^2 + 2p''(p''q^{VI} - q''p^{VI})] &= 0,000000(\bar{11},7999360), \\
\frac{1}{6}(m^{VI}m'')_4[(q'' - q^{VI})^3 + (q'' - q^{VI})(p'' - p^{VI})^2 + 2p''(p''q^{VI} - q''p^{VI})] &= -0,000000(\bar{11},2050080), \\
(m^{VI}m'')_{10}[2h'h^{VI}(q'' - q^{VI}) + (h'l^{VI} + h^{VI}l'')p^{VI} - 2l'h^{VI}p''] &= -0,000000(\bar{8},1064697), \\
(m^{VI}m'')_{11}[2h'h^{VI}(q'' - q^{VI}) + (h'l^{VI} + h^{VI}l'')p^{VI} - 2l'h^{VI}p''] &= -0,000000(\bar{8},1144353), \\
(m^{VI}m'')_{12}[2h'h^{VI}(q'' - q^{VI}) + (h'l^{VI} + h^{VI}l'')p^{VI} - 2l'h^{VI}p''] &= 0,000000(\bar{11},5975584), \\
\frac{1}{2}(m^{VI}m'')(q'' - q^{VI})(l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}) &= 0,000000(\bar{10},6749487).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка $= 0,000000$.

Уранъ и Марсъ.

$$\begin{aligned}
(m^{VI}m''')(q''' - q^{VI}) &= 0,000000(\bar{7},6876890), \\
\frac{1}{2}(m^{VI}m''')[2(q'''q^{VI} + p'''p^{VI})(q''' - q^{VI}) - q'''((q''' - q^{VI})^2 + (p''' - p^{VI})^2) - 3q^{VI}(q'''^2 - q^{VI2}) - 3p^{VI}(q'''p''' - q^{VI}p^{VI})] &= -0,000000(\bar{10},4169905), \\
(m^{VI}m''')_4[l^{VI2} + h^{VI2} + l'''^2 + h'''^2](q''' - q^{VI}) &= -0,000000(\bar{11},7051206), \\
(m^{VI}m''')_4[l^{VI2} + h^{VI2} + l'''^2 + h'''^2](q''' - q^{VI}) &= 0,000000(\bar{9},9089065), \\
(m^{VI}m''')_2[(l'''^2 - h'''^2)(q''' - q^{VI}) + 2l'''h'''(p''' - p^{VI})] &= -0,000000(\bar{11},7641670), \\
\overline{(m^{VI}m''')} &= 0,000007(\bar{6},8250550), \\
\overline{(m^{VI}m''')}[(l'''^2 - h'''^2)(q''' - q^{VI}) + 2l'''h'''(p''' - p^{VI})] &= 0,000000(\bar{11},5482990), \\
(m^{VI}m''')_{13}[(l^{VI2} - h^{VI2})(q''' - q^{VI}) + 2l^{VI}h^{VI}(p''' - p^{VI})] &= -0,000000(\bar{10},7114731), \\
(m^{VI}m''')_{14}[(l^{VI2} - h^{VI2})(q''' - q^{VI}) + 2l^{VI}h^{VI}(p''' - p^{VI})] &= 0,000000(\bar{10},8809946).
\end{aligned}$$

$$\begin{aligned}
 2(m^{VI}m''')_{15}[(l''l^{VI}+h''h^{VI})(q'''-q^{VI})-(h''l^{VI}-h^{VI}l'')p'''] &= 0,000000(\bar{8},5467930), \\
 2(m^{VI}m''')_{16}[(l''l^{VI}+h''h^{VI})(q'''-q^{VI})-(h''l^{VI}-h^{VI}l'')p'''] &= -0,000000(\bar{8},5554216), \\
 \frac{1}{3}(m^{VI}m''')_4[(q'''-q^{VI})^3+(q'''-q^{VI})(p'''-p^{VI})^2-p'''(p'''q^{VI}-q'''p^{VI})] &= 0,000000(10,2326273), \\
 (m^{VI}m''')_1[(q'''-q^{VI})^3+(q'''-q^{VI})(p'''-p^{VI})^2-p'''(p'''q^{VI}-q'''p^{VI})] &= -0,000000(12,5059627), \\
 (\overline{m^{VI}m'''})_1 &= -0,000007(\bar{6},8353621), \\
 (\overline{m^{VI}m'''})_1[(q'''-q^{VI})^3+(q'''-q^{VI})(p'''-p^{VI})^2+2p'''(p'''q^{VI}-q'''p^{VI})] &= 0,000000(12,9035480), \\
 \frac{1}{6}(m^{VI}m''')_4[(q'''-q^{VI})^3+(q'''-q^{VI})(p'''-p^{VI})^2+2p'''(p'''q^{VI}-q'''p^{VI})] &= -0,000000(12,9155645), \\
 (m^{VI}m''')_{10}[2h''h^{VI}(q'''-q^{VI})+(h''l^{VI}+h^{VI}l'')p^{VI}-2l''h^{VI}p'''] &= -0,000000(\bar{9},6431549), \\
 (m^{VI}m''')_{11}[2h''h^{VI}(q'''-q^{VI})+(h''l^{VI}+h^{VI}l'')p^{VI}-2l''h^{VI}p'''] &= -0,000000(\bar{9},6616479), \\
 (m^{VI}m''')_{12}[2h''h^{VI}(q'''-q^{VI})+(h''l^{VI}+h^{VI}l'')p^{VI}-2l''h^{VI}p'''] &= 0,000000(11,5076639), \\
 \frac{1}{2}(m^{VI}m''')(q'''-q^{VI})(l^{VI2}+h^{VI2}+3p^{VI2}+3q^{VI2}) &= 0,000000(10,8213397).
 \end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Уранъ и Юпитеръ.

$$\begin{aligned}
 (m^{VI}m^{IV})(q^{IV}-q^{VI}) &= -0,006849(\bar{3},8356552), \\
 \frac{1}{2}(m^{VI}m^{IV})[2(q^{IV}q^{VI}+p^{IV}p^{VI})(q^{IV}-q^{VI})-q^{IV}((q^{IV}-q^{VI})^2+(p^{IV}-p^{VI})^2)-3q^{VI}(q^{IV2}-q^{VI2})-3p^{VI}(q^{IV}p^{IV}-q^{VI}p^{VI})] &= 0,000000(\bar{7},8132654), \\
 (m^{VI}m^{IV})_1(q^{IV}-q^{VI})[l^{IV2}+h^{IV2}+l^{VI2}+h^{VI2}] &= 0,000004(\bar{6},5972160), \\
 (m^{VI}m^{IV})_4[l^{IV2}+h^{IV2}+l^{VI2}+h^{VI2}](q^{IV}-q^{VI}) &= -0,000059(\bar{5},7733909), \\
 (m^{VI}m^{IV})_2[(l^{IV2}-h^{IV2})(q^{IV}-q^{VI})+2l^{IV}h^{IV}(p^{IV}-p^{VI})] &= 0,000003(\bar{6},5195269), \\
 (\overline{m^{VI}m^{IV}}) &= 0,135953(\bar{1},1333901), \\
 (\overline{m^{VI}m^{IV}})[(l^{IV2}-h^{IV2})(q^{IV}-q^{VI})+2l^{IV}h^{IV}(p^{IV}-p^{VI})] &= -0,000002(\bar{6},2429686), \\
 (m^{VI}m^{IV})_{13}[(l^{VI2}-h^{VI2})(q^{IV}-q^{VI})+2l^{VI}h^{VI}(p^{IV}-p^{VI})] &= 0,000019(\bar{5},2713881), \\
 (m^{VI}m^{IV})_{14}[(l^{VI2}-h^{VI2})(q^{IV}-q^{VI})+2h^{VI}l^{VI}(p^{IV}-p^{VI})] &= -0,000045(\bar{5},6567548), \\
 2(m^{VI}m^{IV})_{15}[(l^{IV}l^{VI}+h^{IV}h^{VI})(q^{IV}-q^{VI})-(h^{IV}l^{VI}-h^{VI}l^{IV})p^{IV}] &= -0,000123(\bar{4},0896656), \\
 2(m^{VI}m^{IV})_{16}[(l^{IV}l^{VI}+h^{IV}h^{VI})(q^{IV}-q^{VI})-(h^{IV}l^{VI}-h^{VI}l^{IV})p^{IV}] &= 0,000158(\bar{4},1990715), \\
 \frac{1}{3}(m^{VI}m^{IV})_4[(q^{IV}-q^{VI})^3+(q^{IV}-q^{VI})(p^{IV}-p^{VI})^2-p^{IV}(p^{IV}q^{VI}-q^{IV}p^{VI})] &= -0,000002(\bar{6},3932874), \\
 (m^{VI}m^{IV})_1[(q^{IV}-q^{VI})^3+(q^{IV}-q^{VI})(p^{IV}-p^{VI})^2-p^{IV}(p^{IV}q^{VI}-q^{IV}p^{VI})] &= 0,000000(\bar{7},6942338), \\
 (\overline{m^{VI}m^{IV}})_1 &= -0,194861(\bar{1},2897266),
 \end{aligned}$$

$$\begin{aligned}
\overline{(m^{VI}m^{IV})}_1 [(q^{IV}-q^{VI})^3 + (q^{IV}-q^{VI})(p^{IV}-p^{VI})^2 + 2p^{IV}(p^{IV}q^{VI}-q^{IV}p^{VI})] &= -0,000000 (\bar{7},9852083), \\
\frac{1}{6}\overline{(m^{VI}m^{IV})}_4 [(q^{IV}-q^{VI})^3 + (q^{IV}-q^{VI})(p^{IV}-p^{VI})^2 + 2p^{IV}(p^{IV}q^{VI}-q^{IV}p^{VI})] &= 0,000001 (\bar{6},1738973), \\
\overline{(m^{VI}m^{IV})}_{10} [2h^{IV}h^{VI}(q^{IV}-q^{VI}) + (h^{IV}l^{VI}+h^{VI}l^{IV})p^{VI} - 2l^{IV}h^{VI}p^{IV}] &= -0,000044 (\bar{5},6478495), \\
\overline{(m^{VI}m^{IV})}_{11} [2h^{VI}h^{IV}(q^{IV}-q^{VI}) + (h^{IV}l^{VI}+h^{VI}l^{IV})p^{VI} - 2l^{IV}h^{VI}p^{IV}] &= -0,000073 (\bar{5},8638329), \\
\overline{(m^{VI}m^{IV})}_{12} (q^{IV}-q^{VI}) [2h^{IV}h^{VI} + (h^{IV}l^{VI}+h^{VI}l^{IV})p^{VI} - 2l^{IV}h^{VI}p^{IV}] &= 0,000005 (\bar{6},7251670), \\
\frac{1}{2}\overline{(m^{VI}m^{IV})} (q^{IV}-q^{VI}) (l^{VI2} + h^{VI2} + 3q^{VI2} + 3p^{VI2}) &= -0,000009 (\bar{6},9693059).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000010$.

Уранъ и Сатурнъ.

$$\begin{aligned}
\overline{(m^{VI}m^V)} (q^V - q^{VI}) &= -0,028144 (\bar{2},4493880), \\
\frac{1}{2}\overline{(m^{VI}m^V)} [2(q^Vq^{VI} + p^Vp^{VI})(q^V - q^{VI}) - q^V(q^V - q^{VI})^2 + (p^V - p^{VI})^3 - 3q^{VI}(q^{V2} - q^{VI2}) - 3p^{VI}(q^Vp^V - q^{VI}p^{VI})] &= 0,000017 (\bar{5},2389354), \\
\overline{(m^{VI}m^V)}_1 (q^V - q^{VI}) (l^{V2} + h^{V2} + l^{VI2} + h^{VI2}) &= 0,000098 (\bar{5},9917165), \\
\overline{(m^{VI}m^V)}_4 (l^{V2} + h^{V2} + h^{VI2} + l^{VI2}) (q^V - q^{VI}) &= -0,000543 (\bar{4},7350733), \\
\overline{(m^{VI}m^V)}_2 [(l^{V2} - h^{V2})(q^V - q^{VI}) + 2l^Vh^V(p^V - p^{VI})] &= -0,000038 (\bar{5},5812471), \\
\overline{(m^{VI}m^V)} &= -0,492802 (\bar{1},6926730), \\
\overline{(m^{VI}m^V)} [(l^{V2} - h^{V2})(q^V - q^{VI}) + 2l^Vh^V(p^V - p^{VI})] &= -0,000033 (\bar{5},5143175), \\
\overline{(m^{VI}m^V)}_{13} [(l^{VI2} - h^{VI2})(q^V - q^{VI}) + 2l^{VI}h^{VI}(p^V - p^{VI})] &= 0,000112 (\bar{4},0506047), \\
\overline{(m^{VI}m^V)}_{14} [(l^{VI2} - h^{VI2})(q^V - q^{VI}) + 2l^{VI}h^{VI}(p^V - p^{VI})] &= -0,000296 (\bar{4},4713477), \\
2\overline{(m^{VI}m^V)}_{15} [(l^Vl^{VI} + h^Vh^{VI})(q^V - q^{VI}) - (h^Vl^{VI} - h^{VI}l^V)p^V] &= -0,000218 (\bar{4},3386600), \\
2\overline{(m^{VI}m^V)}_{16} [(l^Vl^{VI} + h^Vh^{VI})(q^V - q^{VI}) - (h^Vl^{VI} - h^{VI}l^V)p^V] &= 0,000659 (\bar{4},8189155), \\
\frac{1}{3}\overline{(m^{VI}m^V)}_4 [(q^V - q^{VI})^3 + (q^V - q^{VI})(p^V - p^{VI})^2 - p^V(p^Vq^{VI} - q^Vp^{VI})] &= -0,000065 (\bar{5},8108209), \\
\overline{(m^{VI}m^V)}_1 [(q^V - q^{VI})^3 + (q^V - q^{VI})(p^V - p^{VI})^2 - p^V(p^Vq^{VI} - q^Vp^{VI})] &= 0,000035 (\bar{5},5445854), \\
\overline{(m^{VI}m^V)}_1 &= -0,196108 (\bar{1},2924959), \\
\overline{(m^{VI}m^V)}_1 [(q^V - q^{VI})^3 + (q^V - q^{VI})(p^V - p^{VI})^2 + 2p^V(p^Vq^{VI} - q^Vp^{VI})] &= -0,000001 (\bar{6},0959530), \\
\frac{1}{6}\overline{(m^{VI}m^V)}_4 [(q^V - q^{VI})^3 + (q^V - q^{VI})(p^V - p^{VI})^2 + 2p^V(p^Vq^{VI} - q^Vp^{VI})] &= 0,000005 (\bar{6},7282387), \\
\overline{(m^{VI}m^V)}_{10} [2h^Vh^{VI}(q^V - q^{VI}) + (h^Vl^{VI} + h^{VI}l^V)p^{VI} - 2l^Vh^{VI}p^V] &= -0,000062 (\bar{5},7896500), \\
\overline{(m^{VI}m^V)}_{11} [2h^Vh^{VI}(q^V - q^{VI}) + (h^Vl^{VI} + h^{VI}l^V)p^{VI} - 2l^Vh^{VI}p^V] &= -0,000342 (\bar{4},5346931),
\end{aligned}$$

$$(m, m')_{12} [2h^V h^{VI} (q^V - q^{VI}) + (h^V l^{VI} + h^{VI} l^V) p^{VI} - 2l^V h^{VI} p^V] = 0,000064 (\bar{5},8092767),$$

$$\frac{1}{2} (m, m') (q^V - q^{VI}) (l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}) = -0,000038 (\bar{5},5830387).$$

Слѣд. сумма членовъ третьяго порядка = 0,000284.

(22). По формулѣ, на стр. 27, вычисляемъ величины $\frac{dq}{dt}$, $\frac{dq'}{dt}$, и пр.:

Меркурій и Венера.

$$-(m, m') (p' - p) = 0,090429 (\bar{2},9563111),$$

$$\frac{1}{2} (m, m') [2(p' - p) (q'q + p'p) - p' (q' - q)^2 + (p' - p)^2] - 3p (p'^2 - p^2) - 3q (q'p' - qp)] = 0,003158 (\bar{3},4994433),$$

$$(m, m')_1 (p' - p) [l'^2 + h'^2 + l^2 + h^2] = 0,003228 (\bar{3},5090537),$$

$$(m, m')_4 (p' - p) [l'^2 + h'^2 + l^2 + h^2] = -0,016163 (\bar{2},2085230),$$

$$(m, m')_2 [(l'^2 - h'^2) (p' - p) - 2l'h' (q' - q)] = 0,000004 (\bar{6},5979811),$$

$$\overline{(m, m')} [(l'^2 - h'^2) (p' - p) - 2l'h' (q' - q)] = 0,000005 (\bar{6},6649902),$$

$$(m, m')_{13} [(l'^2 - h'^2) (p' - p) - 2lh' (q' - q)] = -0,010620 (\bar{2},0261411),$$

$$(m, m')_{14} [(l'^2 - h'^2) (p' - p) - 2lh' (q' - q)] = 0,028423 (\bar{2},4536807),$$

$$2 (m, m')_{15} [(l'l' + hh') (p' - p) + (h'l - hl') q'] = 0,000031 (\bar{5},4978755),$$

$$2 (m, m')_{16} [(l'l' + hh') (p' - p) + (h'l - hl') q'] = -0,000127 (\bar{4},1027979),$$

$$\frac{1}{3} (m, m')_4 [(p' - p)^3 + (p' - p) (q' - q)^2 + q' (p'q - q'p)] = -0,000522 (\bar{4},7176647),$$

$$(m, m')_1 [(p' - p)^3 + (p' - p) (q' - q)^2 + q' (p'q - q'p)] = 0,000313 (\bar{4},4953167),$$

$$\overline{(m, m')}_1 [(p' - p)^3 + (p' - p) (q' - q)^2 - 2q' (p'q - q'p)] = 0,000092 (\bar{5},9664441),$$

$$\frac{1}{6} (m, m')_4 [(p' - p)^3 + (p' - p) (q' - q)^2 - 2q' (p'q - q'p)] = -0,000595 (\bar{4},774901),$$

$$(m, m')_{10} [2ll' (p' - p) + (h'l + hl') q - 2lh' q'] = -0,000896 (\bar{4},9522815),$$

$$(m, m')_{11} [2ll' (p' - p) + (h'l + hl') q - 2lh' q'] = -0,006665 (\bar{3},8238409),$$

$$(m, m')_{12} [2ll' (q' - q) + (h'l + hl') q - 2lh' q'] = 0,001378 (\bar{3},1394793),$$

$$\frac{1}{2} (m, m') (p' - p) [l'^2 + h'^2 + 3p'^2 + 3q'^2] = -0,003957 (\bar{3},5974182).$$

Слѣд. сумма членовъ третьяго порядка = 0,029023.

Меркурій и Земля.

$$\begin{aligned}
& -(m, m'')(p'' - p) = 0,078041 (\bar{2}, 8923653), \\
& \frac{1}{2} (m, m'') [2(p'' - p)(q''q + p''p) - p''(q'' - q)^2 + (p'' - p)^2 - 3p(p''^2 - p^2) - 3q(q''p'' - qp)] \\
& \quad = 0,001765 (\bar{3}, 2469325), \\
& (m, m'')_1 (p'' - p) [l''^2 + h''^2 + l^2 + h^2] = 0,000103 (\bar{4}, 0141057), \\
& (m, m'')_4 (p'' - p) [l''^2 + h''^2 + l^2 + h^2] = -0,000839 (\bar{4}, 9236014), \\
& (m, m'')_2 [(l''^2 - h''^2)(p'' - p) - 2l'h''(q'' - q)] = -0,000004 (\bar{6}, 6437132), \\
& \overline{(m, m'')} [(l''^2 - h''^2)(p'' - p) - 2l'h''(q'' - q)] = -0,000000 (\bar{7}, 3950681), \\
& (m, m'')_{13} [(l^2 - h^2)(p'' - p) - 2lh(q'' - q)] = 0,004449 (\bar{3}, 6483154), \\
& (m, m'')_{14} [(l^2 - h^2)(p'' - p) - 2lh(q'' - q)] = 0,011226 (\bar{2}, 0502392), \\
& 2(m, m'')_{15} [(l'l'' + hh'')(p'' - p) + (h'l - hl'')q''] = -0,006931 (\bar{3}, 8407764), \\
& 2(m, m'')_{16} [(l'l'' + hh'')(p'' - p) + (h'l - hl'')q''] = 0,012248 (\bar{2}, 0880756), \\
& \frac{1}{8} (m, m'')_4 [(p'' - p)^3 + (p'' - p)(q'' - q)^2 + q''(p''q - pq'')] = -0,000991 (\bar{4}, 9959691), \\
& (m, m'')_1 [(p'' - p)^3 + (p'' - p)(q'' - q)^2 + q''(p''q - pq'')] = 0,000366 (\bar{4}, 5635947), \\
& \overline{(m, m'')}_1 [(p'' - p)^3 + (p'' - p)(q'' - q)^2 - 2q''(p''q - pq'')] = 0,000233 (\bar{4}, 3678920), \\
& \frac{1}{6} (m, m'')_4 [(p'' - p)^3 + (p'' - p)(q'' - q)^2 - 2q''(p''q - pq'')] = -0,000495 (\bar{4}, 6949391), \\
& (m, m'')_{10} [2l'l''(p'' - p) + (h'l + hl'')q - 2lh''q''] = 0,000066 (\bar{5}, 8193677), \\
& (m, m'')_{11} [2l'l''(p'' - p) + (h'l + hl'')q - 2lh''q''] = 0,000183 (\bar{4}, 2627174), \\
& (m, m'')_{12} [2l'l''(p'' - p) + (h'l + hl'')q - 2lh''q''] = -0,000024 (\bar{5}, 3804369), \\
& \frac{1}{2} (m, m'') (p'' - p) [l^2 + h^2 + 3q^2 + 3p^2] = -0,003415 (\bar{3}, 5334724).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,012548.

Меркурій и Марсъ.

$$\begin{aligned}
& -(m, m''')(p''' - p) = 0,001797 (\bar{3}, 2547434), \\
& \frac{1}{2} (m, m''') [2(p''' - p)(q'''q + p'''p) - p'''(q''' - q)^2 + (p''' - p)^2 - 3p(p'''^2 - p^2) - 3q(q'''p''' - qp)] \\
& \quad = 0,000034 (\bar{5}, 5264950), \\
& (m, m''')_1 (p''' - p) [l'''^2 + h'''^2 + l^2 + h^2] = 0,000009 (\bar{6}, 9479765), \\
& (m, m''')_4 (p''' - p) [l'''^2 + h'''^2 + l^2 + h^2] = -0,000171 (\bar{4}, 2337686), \\
& (m, m''')_2 [(l'''^2 - h'''^2)(p''' - p) - 2l'''h'''(q''' - q)] = 0,000006 (\bar{6}, 7679503),
\end{aligned}$$

$$\begin{aligned}
 \overline{(m, m''')} [(l''^2 - h''^2)(p''' - p) - 2l''h''(q''' - q)] &= -0,000003 (\bar{6}, 5406380), \\
 (m, m''')_{13} [(l^2 - h^2)(p''' - p) - 2lh(q''' - q)] &= -0,000087 (\bar{5}, 9405606), \\
 (m, m''')_{14} [(l^2 - h^2)(p''' - p') + 2lh(q''' - q')] &= 0,000211 (\bar{4}, 3251023), \\
 2(m, m''')_{15} [(ll''' + hh''')(p''' - p) + (h'''l - l'''h)q'''] &= 0,000017 (\bar{5}, 2222753), \\
 2(m, m''')_{16} [(ll''' + hh''')(p''' - p) + (h'''l - l'''h)q'''] &= -0,000021 (\bar{5}, 3171625), \\
 \frac{1}{3}(m, m''')_4 [(p''' - p)^3 + (p''' - p)(q''' - q)^2 + q'''(p'''q - pq''')] &= -0,000009 (\bar{6}, 9601218), \\
 (m, m''')_1 [(p''' - p)^3 + (p''' - p)(q''' - q)^2 + q'''(p'''q - pq''')] &= 0,000000 (\bar{8}, 8700513), \\
 \overline{(m, m''')}_1 [(p''' - p)^3 + (p''' - p)(q''' - q)^2 - 2q'''(p'''q - pq''')] &= 0,000003 (\bar{6}, 5380480), \\
 \frac{1}{6}(m, m''')_4 [(q''' - q)^3 + (p''' - p)(q''' - q)^2 - 2q'''(p'''q - pq''')] &= -0,000005 (\bar{6}, 6669643), \\
 (m, m''')_{40} [2l'''(p''' - p) + (h'''l + hl''')q - 2lh'''q'''] &= 0,000065 (\bar{5}, 8116628), \\
 (m, m''')_{11} [2l'''(p''' - p) + (h'''l + hl''')q - 2hl'''q'''] &= 0,000100 (\bar{4}, 0010673), \\
 (m, m)_{12} [2l'''^2(p''' - p) + (h'''l + hl''')q - 2lh'''q'''] &= -0,000006 (\bar{6}, 8121861), \\
 \frac{1}{2}(m, m''')(p''' - p)(l^2 + h^2 + 3p^2 + 3q^2) &= -0,000079 (\bar{5}, 8958505).
 \end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000134.

Меркурій и Юпитеръ.

$$\begin{aligned}
 -(m, m^{IV})(p^{IV} - p) &= 0,104899 (\bar{1}, 0207715), \\
 \frac{1}{2}(m, m^{IV}) [2(p^{IV} - p)(q^{IV}q + p^{IV}p) - p^{IV}((q^{IV} - q)^2 + (p^{IV} - p)^2) - 3p(p^{IV2} - p^2) - 3q(q^{IV}p^{IV} - pq)] & \\
 &= 0,002702 (\bar{3}, 4317258), \\
 (m, m^{IV})_1 (l^{IV2} + h^{IV2} + l^2 + h^2)(p^{IV} - p) &= 0,000040 (\bar{5}, 6037957), \\
 (m, m^{IV})_4 (l^{IV2} + h^{IV2} + l^2 + h^2)(p^{IV} - p) &= -0,007310 (\bar{3}, 8639251), \\
 (m, m^{IV})_2 [(l^{IV2} - h^{IV2})(p^{IV} - p) - 2l^{IV}h^{IV}(q^{IV} - q)] &= 0,000025 (\bar{5}, 4025003), \\
 \overline{(m, m^{IV})} [(l^{IV2} - h^{IV2})(p^{IV} - p) - 2l^{IV}h^{IV}(q^{IV} - q)] &= -0,000040 (\bar{5}, 6040858), \\
 (m, m^{IV})_{13} [(l^2 - h^2)(p^{IV} - p) - 2lh(q^{IV} - q)] &= -0,005230 (\bar{3}, 7185099), \\
 (m, m^{IV})_{14} [(l^2 - h^2)(p^{IV} - p) - 2lh(q^{IV} - q)] &= 0,012241 (\bar{2}, 0878414), \\
 2(m, m^{IV})_{15} [(ll^{IV} + hh^{IV})(p^{IV} - p) + (h^{IV}l - h^{IV}l)q^{IV}] &= 0,005661 (\bar{3}, 7529357), \\
 2(m, m^{IV})_{16} [(ll^{IV} + hh^{IV})(p - p^{IV}) + (h^{IV}l - h^{IV}l)q^{IV}] &= -0,005761 (\bar{3}, 7604994), \\
 \frac{1}{3}(m, m^{IV})_4 [(p^{IV} - p)^3 + (p^{IV} - p)(q^{IV} - q)^2 + q^{IV}(p^{IV}q - pq^{IV})] &= -0,000657 (\bar{4}, 8174366), \\
 (m, m^{IV})_1 [(p^{IV} - p)^3 + (p^{IV} - p)(q^{IV} - q)^2 + q^{IV}(p^{IV}q - pq^{IV})] &= 0,000011 (\bar{5}, 0344285),
 \end{aligned}$$

$$\begin{aligned}
\overline{(m, m^{IV})}_1 [(p^{IV} - p)^3 + (p^{IV} - p)(q^{IV} - q)^2 - 2q^{IV}(p^{IV}q - pq^{IV})] &= 0,000316 (\bar{4}, 5001031), \\
\frac{1}{6} (m, m^{IV})_4 [(q^{IV} - q)^3 + (p^{IV} - p)(q^{IV} - q)^2 - 2p^{IV}(p^{IV}q - pq^{IV})] &= -0,000319 (\bar{4}, 5041106), \\
(m, m^{IV})_{10} [2ll^{IV}(p^{IV} - p) + (h^{IV}l + hl^{IV})q - 2lh^{IV}q^{IV}] &= 0,009566 (\bar{3}, 9807322), \\
(m, m^{IV})_{11} [2ll^{IV}(p^{IV} - p) + (h^{IV}l + hl^{IV})q - 2lh^{IV}q^{IV}] &= 0,009930 (\bar{3}, 9969581), \\
(m, m^{IV})_{12} [2ll^{IV}(p^{IV} - p) + (h^{IV}l + hl^{IV})q - 2lh^{IV}q^{IV}] &= -0,000061 (\bar{5}, 7867928), \\
\frac{1}{2} (m, m^{IV})(p^{IV} - p)[l^2 + h + 3q^2 + 3p^2] &= -0,004591 (\bar{3}, 6618786),
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,012371.

Меркурій и Сатурнъ.

$$\begin{aligned}
-(m, m^V)(p^V - p) &= 0,003689 (\bar{3}, 5668655), \\
\frac{1}{2} (m, m^V) [2(p^V - p)(q^Vq + p^Vp) - p^V((q^V - q)^2 + (p^V - p)^2) - 3p(p^{V2} - p^2) - 3q(q^Vp^V - qp)] &= 0,000116 (\bar{4}, 0651062), \\
(m, m^V)_1 (p^V - p)[l^{V2} + h^{V2} + l^2 + h^2] &= 0,000000 (\bar{7}, 6183920), \\
(m, m^V)_4 (p^V - q)[l^{V2} + h^{V2} + l^2 + h^2] &= -0,000042 (\bar{5}, 6288349), \\
(m, m^V)_2 [(l^{V2} - h^{V2})(p^V - p) - 2l^Vh^V(q^V - q)] &= -0,000003 (\bar{6}, 4908247), \\
(m, m^V)_1 [(l^{V2} - h^{V2})(p^V - p) - 2l^Vh^V(q^V - q)] &= 0,000003 (\bar{6}, 4857699), \\
(m, m^V)_{13} [(l^2 - h^2)(p^V - p) - 2lh(q^V - q)] &= -0,000230 (\bar{4}, 3610571), \\
(m, m^V)_{14} [(l^2 - h^2)(p^V - p) - 2lh(q^V - q)] &= 0,000536 (\bar{4}, 7294378), \\
2(m, m)_{15} [(ll^V + hh^V)(p^V - p) + (h^Vl - l^Vh)q^V] &= 0,001106 (\bar{3}, 0438367), \\
2(m, m^V)_{16} [(ll^V + hh^V)(q^V - q) + (h^Vl - l^Vh)q^V] &= -0,001111 (\bar{3}, 0460763), \\
\frac{1}{3} (m, m^V)_4 [(p^V - p)^3 + (p^V - p)(q^V - q)^2 + q^V(p^Vq - pq^V)] &= -0,000004 (\bar{6}, 6492424), \\
(m, m^V)_1 [(p^V - p)^3 + (p^V - p)(q^V - q)^2 + q^V(p^Vq - pq^V)] &= 0,000000 (\bar{7}, 1159208), \\
\overline{(m, m^V)}_1 [(p^V - p)^3 + (p^V - p)(q^V - q)^2 - 2q^V(p^Vq - pq^V)] &= 0,000009 (\bar{6}, 9329553), \\
\frac{1}{6} (m, m^V)_4 [(p^V - p)^3 + (p^V - p)(q^V - q)^2 - 2q^V(p^Vq - pq^V)] &= -0,000001 (\bar{6}, 1621989), \\
(m, m^V)_{10} [2ll^V(p^V - p) + (h^Vl + l^Vh)q - 2lh^Vq^V] &= 0,000568 (\bar{4}, 7541244), \\
(m, m^V)_{11} [2ll^V(p^V - p) + (h^Vl + l^Vh)q - 2lh^Vq^V] &= 0,000574 (\bar{4}, 7589517), \\
(m, m^V)_{12} [2ll^V(p^V - p) + (h^Vl + l^Vh)q - 2lh^Vq^V] &= -0,000001 (\bar{6}, 0254168), \\
\frac{1}{2} (m, m^V)(p^V - p)[l^2 + h^2 + 3p^2 + 3q^2] &= -0,000161 (\bar{4}, 2079726).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000763.

Меркурій и Уранъ.

$$\begin{aligned}
& -(m, m^{VI})(p^{VI} - p) = 0,000139 (\bar{4}, 1447729), \\
& \frac{1}{2}(m, m^{VI})[2(p^{VI} - p)(p^{VI}p + q^{VI}q) - p^{VI}((q^{VI} - q)^2 + (p^{VI} - p)^2) - 3p(q^{VI2} - q^2) - 3q(q^{VI}p^{VI} - qp)] \\
& \quad = 0,000003 (\bar{6}, 5175113), \\
& (m, m^{VI})_1(p^{VI} - p)[l^{VI2} + h^{VI2} + l^2 + h^2] = 0,000000 (\bar{9}, 5789123), \\
& (m, m^{VI})_4(p^{VI} - p)[l^{VI2} + h^{VI2} + l^2 + h^2] = -0,000009 (\bar{6}, 9693327), \\
& (m, m^{VI})_2[(l^{VI2} - h^{VI2})(p^{VI} - p) - 2l^{VI}h^{VI}(q^{VI} - q)] = 0,000000 (\bar{7}, 0140814), \\
& \overline{(m, m^{VI})}[(l^{VI2} - h^{VI2})(p^{VI} - p) - 2l^{VI}h^{VI}(q^{VI} - q)] = -0,000000 (\bar{7}, 0133219), \\
& (m, m^{VI})_{13}[(l^2 - h^2)(p^{VI} - p) - 2lh(q^{VI} - q)] = -0,000006 (\bar{6}, 7973404), \\
& (m, m^{VI})_{14}[(l^2 - h^2)(p^{VI} - p) - 2lh(q^{VI} - q)] = 0,000015 (\bar{5}, 1651696), \\
& 2(m, m^{VI})_{15}[(ll^{VI} + hh^{VI})(p^{VI} - p) + (h^{VI}l - l^{VI}h)q^{VI}] = -0,000007 (\bar{6}, 8537585), \\
& 2(m, m^{VI})_{16}[(ll^{VI} + hh^{VI})(p^{VI} - p) + (h^{VI}l - l^{VI}h)q^{VI}] = 0,000007 (\bar{6}, 8543080), \\
& \frac{1}{3}(m, m^{VI})_4[(p^{VI} - p)^3 + (p^{VI} - p)(q^{VI} - q)^2 + q^{VI}(p^{VI}q - pq^{VI})] = -0,000000 (\bar{7}, 9331283), \\
& (m, m^{VI})_1[(p^{VI} - p)^3 + (p^{VI} - p)(q^{VI} - q)^2 + q^{VI}(p^{VI}q - pq^{VI})] = 0,000000 (\bar{9}, 0198292), \\
& \overline{(m, m^{VI})}_1[(p^{VI} - p)^3 + (p^{VI} - p)(q^{VI} - q)^2 - 2q^{VI}(p^{VI}q - pq^{VI})] = 0,000000 (\bar{7}, 6355326), \\
& \frac{1}{6}(m, m^{VI})_4[(p^{VI} - p)^3 + (p^{VI} - p)(q^{VI} - q)^2 - 2q^{VI}(p^{VI}q - pq^{VI})] = -0,000000 (\bar{7}, 6363062), \\
& (m, m^{VI})_{10}[2ll^{VI}(p^{VI} - p) + (h^{VI}l + hl^{VI})q - 2lh^{VI}q^{VI}] = -0,000089 (\bar{5}, 9508095), \\
& (m, m^{VI})_{11}[2ll^{VI}(p^{VI} - p) + (h^{VI}l + hl^{VI})q - 2lh^{VI}q^{VI}] = -0,000089 (\bar{5}, 9520031), \\
& (m, m^{VI})_{12}[2ll^{VI}(p^{VI} - p) + (h^{VI}l + hl^{VI})q - 2lh^{VI}q^{VI}] = 0,000000 (\bar{8}, 6126468), \\
& \frac{1}{2}(m, m^{VI})(p^{VI} - p)(l^2 + h^2 + 3p^2 + 3q^2) = -0,000006 (\bar{6}, 7858800),
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000015.

Венера и Меркурій.

$$\begin{aligned}
& -(m', m)(p - p') = -0,008861 (\bar{3}, 9474926), \\
& \frac{1}{2}(m', m)[2(p - p')(qq' + pp') - p((q' - q)^2 + (p' - p)^2) - 3p'(p^2 - p'^2) - 3q'(qp - q'p')] \\
& \quad = -0,000172 (\bar{4}, 2351441), \\
& (m', m)_1(p - p')[l^2 + h^2 + l'^2 + h'^2] = -0,000316 (\bar{4}, 5002352), \\
& (m', m)_4(p - p')[l^2 + h^2 + l'^2 + h'^2] = 0,001584 (\bar{3}, 1997045), \\
& (m', m)_2[(l^2 - h^2)(p - p') - 2lh(q - q')] = 0,000357 (\bar{4}, 552969),
\end{aligned}$$

$$\begin{aligned}
\overline{(m',m)} [(l^2 - h^2)(p - p') - 2lh(q - q')] &= -0''000417 (\bar{4},6199759), \\
(m',m)_{13} [(l'^2 - h'^2)(p - p') - 2l'h'(q - q')] &= -0''000001 (\bar{6},0535184), \\
(m',m)_{14} [(l'^2 - h'^2)(p - p') - 2l'h'(q - q')] &= 0''000003 (\bar{6},4810580), \\
2(m',m)_{15} [(l'l' + hh')(p - p') + (hl' - lh')q] &= 0''000029 (\bar{5},4578160), \\
2(m',m)_{16} [(l'l' + hh')(p' - q) + (hl' - lh')q] &= -0''000115 (\bar{4},0627384), \\
\frac{1}{3}(m',m)_4 [(p' - p)^3 + (p' - p)(q - q')^2 + q(pq' - p'q)] &= -0''000047 (\bar{5},6774735), \\
(m',m)_1 [(p' - p)^3 + (p' - p)(q - q')^2 + q(pq' - p'q)] &= 0''000028 (\bar{5},4551255), \\
\overline{(m',m)}_1 [(p' - p)^3 + (p' - p)(q - q')^2 - 2q(pq' - p'q)] &= -0''000024 (\bar{5},3876939), \\
\frac{1}{6}(m',m)_4 [(p - p')^3 + (p - p')(q' - q')^2 - 2q(pq' - p'q)] &= 0''000157 (\bar{4},1961517), \\
(m',m)_{10} [2l'l'(p - p') + (hl' + h'l)q' - 2l'hq] &= 0''000008 (\bar{6},9252010), \\
(m',m)_{11} [2l'l'(p - p') + (hl' + h'l)q' - 2l'hq] &= 0''000063 (\bar{5},7967604), \\
(m',m)_{12} [2l'l'(p - p') + (hl' + h'l)q - 2l'hq] &= -0''000013 (\bar{5},1123988), \\
\frac{1}{2}(m',m)(p - p')(l'^2 + h'^2 + 3p'^2 + 3q'^2) &= 0''000094 (\bar{5},9720317).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0''002002.

Венера и Земля.

$$\begin{aligned}
-(m',m'')(p'' - p') &= 0''389162 (\bar{1},5901300), \\
\frac{1}{2}(m',m'')[2(p'' - p')(q''q' + p''p') - p''((q'' - q')^2 + (p'' - p')^2) - 3p'(p''^2 - p'^2) - 3q'(q''p'' - q'p')] &= 0''002050 (\bar{3},3117091), \\
(m',m'')_1 (p'' - p')[l''^2 + h''^2 + l'^2 + h'^2] &= 0''000442 (\bar{4},6457014), \\
(m',m'')_4 (p'' - p')[l''^2 + h''^2 + l'^2 + h'^2] &= -0''001573 (\bar{3},1968834), \\
(m',m'')_2 [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= 0''001467 (\bar{3},1664739), \\
\overline{(m',m'')} [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= -0''003677 (\bar{3},5655696), \\
(m',m'')_{13} [(l'^2 - h'^2)(p'' - p') - 2l'h'(q'' - q')] &= 0''000003 (\bar{6},4273702), \\
(m',m'')_{14} [(l'^2 - h'^2)(p'' - p') - 2l'h'(q'' - q')] &= -0''000008 (\bar{6},9042330), \\
2(m',m'')_{15} [(l'l' + h'h'')(p'' - p') + q''(h''l' - h'l'')] &= 0''000060 (\bar{5},7770109), \\
2(m',m'')_{16} [(l'l' + h'h'')(p'' - p') + q''(h''l' - h'l'')] &= -0''000522 (\bar{4},7181919), \\
\frac{1}{3}(m',m'')_4 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 + q''(p''q' - p'q'')] &= -0''005595 (\bar{3},7477826), \\
(m',m'')_1 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 + q''(p''q' - p'q'')] &= 0''004718 (\bar{3},6737219),
\end{aligned}$$

$$\begin{aligned}
\overline{(m', m'')}_1 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 - 2q''(p''q' - p'q'')] &= -0,000430 (\bar{4}, 6330804), \\
\frac{1}{6} \overline{(m', m'')}_4 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 - 2q''(p''q' - p'q'')] &= -0,002797 (\bar{3}, 4467526), \\
(m', m'')_{10} [2l'l''(p'' - p') + (h''l' + h'l'')q' - 2l'h''q''] &= -0,000004 (\bar{6}, 6155010), \\
(m', m'')_{11} [2l'l''(p'' - p') + (h''l' + h'l'')q' - 2l'h''q''] &= -0,000234 (\bar{4}, 3694083), \\
(m', m'')_{12} [2l'l''(p'' - p') + (h''l' + h'l'')q' - 2l'h''q''] &= 0,000066 (\bar{5}, 8229796), \\
\frac{1}{2} \overline{(m', m'')} (p'' - p')(l'^2 + h'^2 + 3p'^2 + 3q'^2) &= -0,002059 (\bar{3}, 3136432).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,014491.

Венера и Марсъ.

$$\begin{aligned}
-(m', m''')(p''' - p') &= 0,003385 (\bar{3}, 5295944), \\
\frac{1}{2} \overline{(m', m''')} [2(p''' - p')(q'''q' + p'''p') - p'''((q''' - q')^2 + (p''' - p')^2) - 3p'(p'''^2 - p'^2) - 3q'(q'''p''' - q'p')] &= 0,000025 (\bar{5}, 3991166), \\
(m', m''')_1 (p''' - p') [l'''^2 + h'''^2 + l'^2 + h'^2] &= 0,000017 (\bar{5}, 2217025), \\
(m', m''')_4 (p''' - p') [l'''^2 + h'''^2 + l'^2 + h'^2] &= -0,000099 (\bar{5}, 9940278), \\
(m', m''')_2 [(l'''^2 - h'''^2)(p''' - p') - 2l'''h'''(q''' - q')] &= 0,000005 (\bar{6}, 6761963), \\
\overline{(m', m''')} [(l'''^2 - h'''^2)(p''' - p') - 2l'''h'''(q''' - q')] &= 0,000003 (\bar{6}, 5076383), \\
(m', m''')_{13} [(l'^2 - h'^2)(p''' - p') - 2l'h'(q''' - q')] &= -0,000000 (\bar{8}, 8789139), \\
(m', m''')_{14} [(l'^2 - h'^2)(p''' - p') - 2l'h'(q''' - q')] &= 0,000000 (\bar{7}, 6192179), \\
2(m', m''')_{15} [(l'l''' + h'h''')(p''' - p') + (h'''l' - l'''h')q'''] &= 0,000003 (\bar{6}, 4192821), \\
2(m', m''')_{16} [(l'l''' + h'h''')(p''' - p') + (h'''l' - l'''h')q'''] &= -0,000007 (\bar{6}, 8393428), \\
\frac{1}{3} \overline{(m', m''')}_4 [(p''' - p')^3 + (p''' - p')(q''' - q')^2 + q'''(p'''q' - p'q''')] &= -0,000006 (\bar{6}, 8067748), \\
(m', m''')_4 [(p''' - p')^3 + (p''' - p')(q''' - q')^2 + q'''(p'''q' - p'q''')] &= 0,000003 (\bar{6}, 5115708), \\
\overline{(m', m''')}_1 [(p''' - p')^3 + (p''' - p')(q''' - q')^2 - 2q'''(p'''q' - p'q''')] &= 0,000000 (\bar{9}, 6935362), \\
\frac{1}{6} \overline{(m', m''')}_4 [(q''' - q')^3 + (p''' - p')(q''' - q')^2 - 2q'''(p'''q' - p'q''')] &= -0,000000 (\bar{8}, 2450581), \\
(m', m''')_{10} [2l'l'''(p''' - p') + (h'''l' + h'l''')q' - 2l'h'''q'''] &= 0,000002 (\bar{6}, 3487770), \\
(m', m''')_{11} [2l'l'''(p''' - p') + (h'''l' + h'l''')q' - 2l'h'''q'''] &= 0,000010 (\bar{5}, 0244886), \\
(m', m''')_{12} [2l'l'''^2(p''' - p') + (h'''l' + h'l''')q' - 2l'h'''q'''] &= -0,000002 (\bar{6}, 2718689), \\
\frac{1}{2} \overline{(m', m''')} (p''' - p')(l'^2 + h'^2 + 3p'^2 + 3q'^2) &= -0,000018 (\bar{5}, 2531076).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,000128.

Венера и Юпитеръ.

$$\begin{aligned}
& -(m', m^{IV})(p^{IV} - p') = 0,141434(\bar{1}, 1505551), \\
& \frac{1}{2}(m', m^{IV})[2(p^{IV} - p')(q^{IV}q' + p^{IV}p') - p^{IV}((q^{IV} - q')^2 + (p^{IV} - p')^2) - 3p'(p^{IV2} - p'^2) - 3q'(q^{IV}p^{IV} - q'p')] \\
& \quad = 0,000832(\bar{4}, 9200870), \\
& (m', m^{IV})_1(p^{IV} - p')(l^{IV2} + h^{IV2} + l'^2 + h'^2) = 0,000010(\bar{5}, 0138150), \\
& (m', m^{IV})_4(p^{IV} - p')(l^{IV2} + h^{IV2} + l'^2 + h'^2) = -0,000548(\bar{4}, 7390766), \\
& (m', m^{IV})_2[(l^{IV2} - h^{IV2})(p^{IV} - p') - 2l^{IV}h^{IV}(q^{IV} - q')] = 0,000061(\bar{5}, 7894706), \\
& \overline{(m', m^{IV})}[(l^{IV2} - h^{IV2})(p^{IV} - p') - 2l^{IV}h^{IV}(q^{IV} - q')] = -0,000055(\bar{5}, 7374658), \\
& (m', m^{IV})_{13}[(l'^2 - h'^2)(p^{IV} - p') - 2l'h'(q^{IV} - q')] = 0,000002(\bar{6}, 2108952), \\
& (m', m^{IV})_{14}[(l'^2 - h'^2)(p^{IV} - p') - 2l'h'(q^{IV} - q')] = -0,000004(\bar{6}, 5835732), \\
& 2(m', m^{IV})_{15}[(l'l^{IV} + h'h^{IV})(p^{IV} - p') + (h^{IV}l' - h'l^{IV})q^{IV}] = -0,000190(\bar{4}, 2778493), \\
& 2(m', m^{IV})_{16}[(l'l^{IV} + h'h^{IV})(p' - p^{IV}) + (h^{IV}l' - h'l^{IV})q^{IV}] = 0,000202(\bar{4}, 3047123), \\
& \frac{1}{3}(m', m^{IV})_4[(p^{IV} - p')^3 + (p^{IV} - p')(q^{IV} - q')^2 + q^{IV}(p^{IV}q' - p'q^{IV})] = -0,000123(\bar{4}, 0915953), \\
& (m', m^{IV})_1[(p^{IV} - p')^3 + (p^{IV} - p')(q^{IV} - q')^2 + q^{IV}(p^{IV}q' - p'q^{IV})] = 0,000007(\bar{6}, 8434550), \\
& \overline{(m', m^{IV})}_1[(p^{IV} - p')^3 + (p^{IV} - p')(q^{IV} - q')^2 - 2q^{IV}(p^{IV}q' - p'q^{IV})] = 0,000051(\bar{5}, 7077937), \\
& \frac{1}{6}(m', m^{IV})_4[(p^{IV} - p')^3 + (p^{IV} - p')(q^{IV} - q')^2 - 2q^{IV}(p^{IV}q' - p'q^{IV})] = -0,000055(\bar{5}, 7450265), \\
& (m', m^{IV})_{10}[2l'l^{IV}(p^{IV} - p') + (h^{IV}l' + h'l^{IV})q' - 2l'h^{IV}q^{IV}] = -0,000330(\bar{5}, 5185325), \\
& (m', m^{IV})_{11}[2l'l^{IV}(p^{IV} - p') + (h^{IV}l' + h'l^{IV})q' - 2l'h^{IV}q^{IV}] = -0,000376(\bar{4}, 5751827), \\
& (m', m^{IV})_{12}[2l'l^{IV}(p^{IV} - p') + (h^{IV}l' + h'l^{IV})q' - 2l'h^{IV}q^{IV}] = 0,000008(\bar{6}, 8970523), \\
& \frac{1}{2}(m', m^{IV})(p^{IV} - p')[l'^2 + h'^2 + 3q'^2 + 3p'^2] = -0,000748(\bar{4}, 8740683),
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,000478.

Венера и Сатурнъ.

$$\begin{aligned}
& -(m', m^V)(p^V - p') = 0,003333(\bar{3}, 5228790), \\
& \frac{1}{2}(m', m^V)[2(p^V - p')(q^Vq' + p^Vp') - p^V((q^V - q')^2 + (p^V - p')^2) - 3p'(p^{V2} - p'^2) - 3q'(q^Vp^V - q'p')] \\
& \quad = 0,000023(\bar{5}, 3647061), \\
& (m', m^V)_1(p^V - p')[l^{V2} + h^{V2} + l'^2 + h'^2] = 0,000000(\bar{8}, 9687990), \\
& (m', m^V)_4(p^V - p')[l^{V2} + h^{V2} + l'^2 + h'^2] = -0,000016(\bar{5}, 2125424), \\
& (m', m^V)_2[(l^{V2} - h^{V2})(p^V - p') - 2l^Vh^V(q^V - q')] = -0,000003(\bar{6}, 4458392),
\end{aligned}$$

$$\begin{aligned}
(\overline{m', m''}) [(l'^2 - h'^2)(p' - p') - 2l'h'(q' - q')] &= 0,000003 (\bar{6}, 4313953), \\
(m', m'')_{13} [(l'^2 - h'^2)(p' - p') - 2l'h'(q' - q')] &= 0,000000 (\bar{7}, 2871506), \\
(m', m'')_{14} [(l'^2 - h'^2)(p' - p') - 2l'h'(q' - q')] &= -0,000000 (\bar{7}, 6565356), \\
2(m', m'')_{15} [(l'l' + h'h')(p' - p') + (h'l' - l'h')q'] &= 0,000004 (\bar{6}, 6181215), \\
2(m', m'')_{16} [(l'l' + h'h')(q' - q') + (h'l' - l'h')q'] &= -0,000004 (\bar{6}, 6259275), \\
\frac{1}{3}(m', m'')_4 [(p' - p')^3 + (p' - p')(q' - q')^2 + q'(p'q' - p'q')] &= -0,000005 (\bar{6}, 6766377), \\
(m', m'')_1 [(p' - p')^3 + (p' - p')(q' - q')^2 + q'(p'q' - p'q')] &= 0,000000 (\bar{8}, 9100196), \\
(\overline{m', m''})_1 [(p' - p')^3 + (p' - p')(q' - q')^2 - 2q'(p'q' - p'q')] &= -0,000014 (\bar{5}, 1539240), \\
\frac{1}{6}(m', m'')_4 [(p' - p')^3 + (p' - p')(q' - q')^2 - 2q'(p'q' - p'q')] &= 0,000001 (\bar{6}, 1648930), \\
(m', m'')_{10} [2l'l'(p' - p') + (h'l' + l'h')q' - 2l'h'q'] &= 0,000000 (\bar{7}, 8164731), \\
(m', m'')_{11} [2l'l'(p' - p') + (h'l' + l'h')q' - 2l'h'q'] &= 0,000000 (\bar{7}, 8333282), \\
(m', m'')_{12} [2l'l'(p' - p') + (h'l' + l'h')q' - 2l'h'q'] &= -0,000000 (\bar{9}, 6395049), \\
\frac{1}{2}(m', m'')(p' - p')[l'^2 + h'^2 + 3p'^2 + 3q'^2] &= -0,000018 (\bar{5}, 2463922).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000003$.

Венера и Уранъ.

$$\begin{aligned}
-(m', m'')(p'' - p') &= 0,000210 (\bar{4}, 3219737), \\
\frac{1}{2}(m', m'')[2(p'' - p')(p''p' + q''q') - p''(q'' - q')^2 + (p'' - p')^2 - 3p'(p''^2 - p'^2) - 3q'(q''p'' - q'p')] &= 0,000001 (\bar{6}, 0501572), \\
(m', m'')_1 (p'' - p')[l''^2 + h''^2 + l'^2 + h'^2] &= 0,000000 (\bar{10}, 9984302), \\
(m', m'')_4 (p'' - p')[l''^2 + h''^2 + l'^2 + h'^2] &= -0,000000 (\bar{7}, 8464150), \\
(m', m'')_2 [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= 0,000000 (\bar{8}, 9587148), \\
(\overline{m', m''}) [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= -0,000000 (\bar{8}, 9552085), \\
(m', m'')_{13} [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= 0,000000 (\bar{10}, 4549938), \\
(m', m'')_{14} [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= -0,000000 (\bar{10}, 8233105), \\
2(m', m'')_{15} [(l'l'' + h'h'')(p'' - p') + (h'l'' - l'h'')q''] &= 0,000001 (\bar{6}, 1098371), \\
2(m', m'')_{16} [(l'l'' + h'h'')(p'' - p') + (h'l'' - l'h'')q''] &= -0,000001 (\bar{6}, 1117412), \\
\frac{1}{3}(m', m'')_4 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 + q''(p''q'' - p'q'')] &= -0,000000 (\bar{7}, 3442751), \\
(m', m'')_1 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 + q''(p''q'' - p'q'')] &= 0,000000 (\bar{10}, 9734016),
\end{aligned}$$

$$\begin{aligned}
\overline{(m', m'^I)}_1 [(p'^I - p')^3 + (p'^I - p')(q'^I - q')^2 - 2q'^I(p'^I q' - p' q'^I)] &= 0,000000 (\bar{7}, 0220930), \\
\frac{1}{6} (m', m'^I)_4 [(p'^I - p')^3 + (p'^I - p')(q'^I - q')^2 - 2q'^I(p'^I q' - p' q'^I)] &= -0,000000 (\bar{7}, 0417814), \\
(m', m'^I)_{10} [2l'^I(p'^I - p') + (h'^I l' + h' l'^I)q' - 2l' h'^I q'^I] &= 0,000032 (\bar{5}, 5093092), \\
(m', m'^I)_{11} [2l'^I(p'^I - p') + (h'^I l' + h' l'^I)q' - 2l' h'^I q'^I] &= 0,000033 (\bar{5}, 5134771), \\
(m', m'^I)_{12} [2l'^I(p'^I - p') + (h'^I l' + h' l'^I)q' - 2l' h'^I q'^I] &= -0,000000 (\bar{8}, 7163368), \\
\frac{1}{2} (m', m'^I) (p'^I - p') (l'^2 + h'^2 + 3p'^2 + 3q'^2) &= -0,000001 (\bar{6}, 0449869),
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000001$.

Земля и Меркурій.

$$\begin{aligned}
-(m'', m) (p - p'') &= -0,005816 (\bar{3}, 7646420), \\
\frac{1}{2} (m'', m) [2(p - p'')(qq'' + pp'') - p((q - q'')^2 + (p - p'')^2) - 3p''(p^2 - p''^2) - 3q''(qp - q''p'')] &= -0,000044 (\bar{5}, 6411026), \\
(m'', m)_1 (p - p'') [l'^2 + h'^2 + l''^2 + h''^2] &= -0,000077 (\bar{5}, 8863825), \\
(m'', m)_4 (p - p'') [l'^2 + h'^2 + l''^2 + h''^2] &= 0,000625 (\bar{4}, 7958782), \\
(m'', m)_2 [(l'^2 - h'^2)(p - p'') - 2lh(q - q'')] &= 0,000106 (\bar{4}, 0249285), \\
\overline{(m'', m)} [(l'^2 - h'^2)(p - p'') - 2lh(q - q'')] &= 0,000006 (\bar{6}, 7762842), \\
(m'', m)_{13} [(l''^2 - h''^2)(p - p'') - 2l''h''(q - q'')] &= 0,000001 (\bar{6}, 0116528), \\
(m'', m)_{14} [(l''^2 - h''^2)(p - p'') - 2l''h''(q - q'')] &= -0,000002 (\bar{6}, 4135766), \\
2(m'', m)_{15} [(ll'' + hh'')(p - p'') + (hl'' - h''l)q] &= -0,000025 (\bar{5}, 3955655), \\
2(m'', m)_{16} [(ll'' + hh'')(p - p'') + (hl'' - h''l)q] &= 0,000044 (\bar{5}, 6428647), \\
\frac{1}{3} (m'', m)_4 [(p - p'')^3 + (p - p'')(q - q'')^2 + q(pq'' - p''q)] &= 0,000074 (\bar{5}, 8682459), \\
(m'', m)_1 [(p - p'')^3 + (p - p'')(q - q'')^2 + q(pq'' - p''q)] &= -0,000027 (\bar{5}, 4358715), \\
\overline{(m'', m)} [(p - p'')^3 + (p - p'')(q - q'')^2 - 2q(pq'' - p''q)] &= -0,000017 (\bar{5}, 2401688), \\
\frac{1}{6} (m'', m)_4 [(p - p'')^3 + (p - p'')(q - q'')^2 - 2q(pq'' - p''q)] &= 0,000037 (\bar{5}, 5672159), \\
(m'', m)_{10} [2l''(p - p'') + (hl'' + h''l)q'' - 2l''hq] &= 0,000009 (\bar{6}, 9531502), \\
(m'', m)_{11} [2l''(p - p'') + (hl'' + h''l)q'' - 2l''hq] &= 0,000025 (\bar{5}, 3964999), \\
(m'', m)_{12} [2l''(p - p'') + (hl'' + h''l)q'' - 2l''hq] &= -0,000003 (\bar{6}, 5142194), \\
\frac{1}{2} (m'', m) (p - p'') [l''^2 + h''^2 + 3p''^2 + 3q''^2] &= 0,000000 (\bar{7}, 8538611).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $0,000472$.

Земля и Венера.

$$\begin{aligned}
&-(m'', m')(p' - p'') = -0,295955 (\bar{1}, 4712256), \\
&\frac{1}{2}(m'', m')[2(p' - p'')(q'q'' + p'p'') - p'((q' - q'')^2 + (p' - p'')^2) - 3p''(p'^2 - p''^2) - 3q''(q'p' - q''p'')] \\
&\quad = -0,000520 (\bar{4}, 7156757), \\
&(m'', m')_1(p' - p'')[l'^2 + h'^2 + l''^2 + h''^2] = -0,000336 (\bar{4}, 5267311), \\
&(m'', m')_4(p' - p'')[l'^2 + h'^2 + l''^2 + h''^2] = 0,001196 (\bar{3}, 0779131), \\
&(m'', m')_2[(l'^2 - h'^2)(p' - p'') - 2l'h'(q' - q'')] = -0,000000 (\bar{7}, 9823341), \\
&(\overline{m'', m'})[(l'^2 - h'^2)(p' - p'') - 2l'h'(q' - q'')] = -0,000002 (\bar{6}, 3814303), \\
&(m'', m')_{13}[(l''^2 - h''^2)(p' - p'') - 2l'h''(q' - q'')] = 0,000216 (\bar{4}, 3353447), \\
&(m'', m')_{14}[(l''^2 - h''^2)(p' - p'') - 2l''h''(q' - q'')] = -0,000649 (\bar{4}, 8122075), \\
&2(m'', m')_{15}[(l'l'' + h'h'')(p' - p'') + q'(h'l'' - h''l')] = -0,000052 (\bar{5}, 7171610), \\
&2(m'', m'')_{16}[(l'l'' + h'h'')(p'' - p') + q''(h''l' - h'l'')] = 0,000455 (\bar{4}, 6583482), \\
&\frac{1}{3}(m'', m')_4[(p' - p'')^3 + (p' - p'')(q' - q'')^2 + q'(p'q'' - p''q')] = 0,004254 (\bar{3}, 6288782), \\
&(m'', m')_1[(p' - p'')^3 + (p' - p'')(q' - q'')^2 + q'(p'q'' - p''q')] = -0,003588 (\bar{3}, 5548175), \\
&(\overline{m'', m'})_1[(p' - p'')^3 + (p' - p'')(q' - q'')^2 - 2q'(p'q'' - p''q')] = 0,000327 (\bar{4}, 5141760), \\
&\frac{1}{6}(m'', m')_4[(p' - p'')^3 + (p' - p'')(q' - q'')^2 - 2q'(p'q'' - p''q')] = 0,002127 (\bar{3}, 3278482), \\
&(m'', m')_{10}[2l'l''(p' - p'') + (h'l'' + h''l')q'' - 2l''h'q'] = 0,000002 (\bar{6}, 3269157), \\
&(m'', m')_{11}[2l'l''(p' - p'') + (h'l'' + h''l')q'' - 2l''h'q'] = 0,000120 (\bar{4}, 0808230), \\
&(m'', m')_{12}[2l'l''(p' - p'') + (h'l'' + h''l')q'' - 2l''h'q'] = -0,000034 (\bar{5}, 5343943), \\
&\frac{1}{2}(m'', m')(p' - p'')[l'^2 + h'^2 + 3p''^2 + 3q''^2] = 0,000042 (\bar{5}, 6205047).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,009704.

Земля и Марсъ.

$$\begin{aligned}
&-(m'', m''')(p''' - p'') = -0,007164 (\bar{3}, 8551399), \\
&\frac{1}{2}(m'', m''')[2(p''' - p'')(q'''q'' + p'''p'') - p'''((q''' - q'')^2 + (p''' - p'')^2) - 3p''(p'''^2 - p''^2) - 3q''(q'''p''' - q''p'')] \\
&\quad = -0,000004 (\bar{6}, 5733135), \\
&(m'', m''')_1(p''' - p'')[l'''^2 + h'''^2 + l''^2 + h''^2] = -0,000128 (\bar{4}, 1076428), \\
&(m'', m''')_4(p''' - p'')[l'''^2 + h'''^2 + l''^2 + h''^2] = 0,000501 (\bar{4}, 7002839), \\
&(m'', m''')_2[(l'''^2 - h'''^2)(p''' - p'') - 2l'''h'''(q''' - q'')] = -0,000071 (\bar{5}, 8501853),
\end{aligned}$$

$$\begin{aligned}
(\overline{m''m'''}) [(l''^2 - h''^2)(p''' - p'') - 2l''h''(q''' - q'')] &= 0,000149 (\bar{4},1742916), \\
(m''m''')_{13} [(l''^2 - h''^2)(p''' - p'') - 2l''h''(q''' - q'')] &= 0,000003 (\bar{6},4522059), \\
(m''m''')_{14} [(l''^2 - h''^2)(p''' - p'') - 2l''h''(q''' - q'')] &= -0,000008 (\bar{6},9009218), \\
2(m''m''')_{15} [(l''l''' + h''h''')(p''' - p'') + (h'''l'' - h''l''')q'''] &= -0,000000 (\bar{9},9450748), \\
2(m''m''')_{16} [(l''l''' + h''h''')(p''' - p'') + (h'''l'' - h''l''')q'''] &= 0,000011 (\bar{5},0610432), \\
\frac{1}{3}(m''m''')_4 [(p''' - p'')^3 + (p''' - p'')(q''' - q'')^2 + q'''(p'''q'' - p''q''')] &= 0,000019 (\bar{5},2895253), \\
(m''m''')_4 [(p''' - p'')^3 + (p''' - p'')(q''' - q'')^2 + q'''(p'''q'' - p''q''')] &= -0,000015 (\bar{5},1740055), \\
(\overline{m''m'''})_4 [(p''' - p'')^3 + (p''' - p'')(q''' - q'')^2 - 2q'''(p'''q'' - p''q''')] &= 0,000000 (\bar{7},7896660), \\
\frac{1}{6}(m''m''')_4 [(p''' - p'')^3 + (p''' - p'')(q''' - q'')^2 - 2p'''(p'''q'' + q'''p'')] &= 0,000009 (\bar{6},9884953), \\
(m''m''')_{10} [2l''l'''(p''' - p'') + (h'''l'' + h''l''')q'' - 2l''h'''q'''] &= -0,000018 (\bar{5},2502773), \\
(m''m''')_{11} [2l''l'''(p''' - p'') + (h'''l'' + h''l''')q'' - 2l''h'''q'''] &= -0,000042 (\bar{5},6292665), \\
(m''m''')_{12} [2l''l'''(p''' - p'') + (h'''l'' + h''l''')q'' - 2l''h'''q'''] &= 0,000011 (\bar{5},0443329), \\
\frac{1}{2}(m''m''')(p''' - p'')(l''^2 + h''^2 + 3p''^2 + 3q''^2) &= 0,000001 (\bar{6},0043590).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000524.

Земля и Юпитеръ.

$$\begin{aligned}
-(m''m^{IV})(p^{IV} - p'') &= -0,160094 (\bar{1},2043767), \\
\frac{1}{2}(m''m^{IV})[2(p^{IV} - p'')(q^{IV}q'' + p^{IV}p'') - p^{IV}((q^{IV} - q'')^2 + (p^{IV} - p'')^2) - 3p''(p^{IV2} - p''^2) - 3q''(q^{IV}p^{IV} - q''p'')] & \\
&= -0,000042 (\bar{5},6246626), \\
(m''m^{IV})_1 (p^{IV} - p'') [l^{IV2} + h^{IV2} + l''^2 + h''^2] &= -0,000025 (\bar{5},3958399), \\
(m''m^{IV})_4 [l^{IV2} + h^{IV2} + l''^2 + h''^2] (p^{IV} - p'') &= 0,000708 (\bar{4},8500901), \\
(m''m^{IV})_2 [(l^{IV2} - h^{IV2})(p^{IV} - p'') - 2l^{IV}h^{IV}(q^{IV} - q'')] &= -0,000095 (\bar{5},9778034), \\
(\overline{m''m^{IV}}) [(l^{IV2} - h^{IV2})(p^{IV} - p'') - 2l^{IV}h^{IV}(q^{IV} - q'')] &= 0,000074 (\bar{5},8683844), \\
(m''m^{IV})_{13} [(l''^2 - h''^2)(p^{IV} - p'') - 2l''h''(q^{IV} - q'')] &= 0,000036 (\bar{5},5544672), \\
(m''m^{IV})_{14} [(l''^2 - h''^2)(p^{IV} - p'') - 2h''l''(q^{IV} - q'')] &= -0,000085 (\bar{5},9313487), \\
2(m''m^{IV})_{15} [(l^{IV}l'' + h^{IV}h'')(p^{IV} - p'') + (h^{IV}l'' - h''l^{IV})q^{IV}] &= -0,000120 (\bar{4},0777998), \\
2(m''m^{IV})_{16} [(l^{IV}l'' + h^{IV}h'')(p^{IV} - p'') + (h^{IV}l'' - h''l^{IV})q^{IV}] &= 0,000135 (\bar{4},1302589), \\
\frac{1}{3}(m''m^{IV})_4 [(p^{IV} - p'')^3 + (p^{IV} - p'')(q^{IV} - q'')^2 + q^{IV}(p^{IV}q'' - p''q^{IV})] &= 0,000048 (\bar{5},6791343), \\
(m''m^{IV})_4 [(p^{IV} - p'')^3 + (p^{IV} - p'')(q^{IV} - q'')^2 + q^{IV}(p^{IV}q'' - p''q^{IV})] &= -0,000005 (\bar{6},7020054),
\end{aligned}$$

$$\begin{aligned}
\overline{(m'', m'')}_1 [(p^{IV} - p'')^3 + (p^{IV} - p'')(q^{IV} - q'')^2 - 2q^{IV}(p^{IV}q'' - p''q^{IV})] &= -0,000020 (\bar{5}, 3059802), \\
\frac{1}{6}(m'', m'')_4 [(p^{IV} - p'')^3 + (p^{IV} - p'')(q^{IV} - q'')^2 - 2q^{IV}(p^{IV}q'' - p''q^{IV})] &= 0,000024 (\bar{5}, 3781040), \\
(m'', m'')_{10} [2l''l^{IV}(p^{IV} - p'') + (h^{IV}l'' + h''l^{IV})q'' - 2l''h^{IV}q^{IV}] &= -0,000139 (\bar{4}, 1446555), \\
(m'', m'')_{11} [2l''l^{IV}(p^{IV} - p'') + (h^{IV}l'' + h''l^{IV})q'' - 2l''h^{IV}q^{IV}] &= -0,000179 (\bar{4}, 2529550), \\
(m'', m'')_{12} (p^{IV} - p'') [2l''l^{IV} + (h^{IV}l'' + h''l^{IV})q'' - 2l''h^{IV}q^{IV}] &= 0,000007 (\bar{6}, 8424605), \\
\frac{1}{2}(m'', m'') (p^{IV} - p'') (l''^2 + h''^2 + 3p''^2 + 3q''^2) &= 0,000022 (\bar{5}, 3535958).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000628.

Земля и Сатурнъ.

$$\begin{aligned}
-(m'', m'') (p' - p'') &= -0,013149 (\bar{2}, 1189071), \\
\frac{1}{2}(m'', m'') [2(p' - p'')(q'q'' + p'p'') - p'((q' - q'')^2 + (p' - p'')^2) - 3p''(p'^2 - p''^2) - 3q''(q'p' - q''p'')] &= -0,000012 (\bar{5}, 0956925), \\
(m'', m'')_1 (p' - p'') (l'^2 + h'^2 + l''^2 + h''^2) &= -0,000008 (\bar{6}, 8815067), \\
(m'', m'')_4 (p' - p'') (l'^2 + h'^2 + h''^2 + l''^2) &= 0,000070 (\bar{5}, 8470360), \\
(m'', m'')_2 [(l'^2 - h'^2)(p' - p'') - 2l'h'(q' - q'')] &= 0,000010 (\bar{5}, 0150230), \\
\overline{(m'', m'')}_1 [(l'^2 - h'^2)(p' - p'') - 2l'h'(q' - q'')] &= -0,000009 (\bar{6}, 9866881), \\
(m'', m'')_{13} [(l'^2 - h'^2)(p' - p'') - 2l'h''(q' - q'')] &= 0,000003 (\bar{6}, 4841908), \\
(m'', m'')_{14} [(l'^2 - h'^2)(p' - p'') - 2l'h''(q' - q'')] &= -0,000007 (\bar{6}, 8548516), \\
2(m'', m'')_{15} [(l'l'' + h'h'')(p' - p'') + (h'l'' - h''l')q'] &= -0,000124 (\bar{4}, 0953529), \\
2(m'', m'')_{16} [(l'l'' + h'h'')(p' - p'') + (h'l'' - h''l')q'] &= 0,000129 (\bar{4}, 1104690), \\
\frac{1}{3}(m'', m'')_4 [(p' - p'')^3 + (p' - p'')(q' - q'')^2 + q'(p'q'' - p''q')] &= 0,000013 (\bar{5}, 1118286), \\
(m'', m'')_4 [(q' - q'')^3 + (p' - p'')(q' - q'')^2 + q'(p'q'' - p''q')] &= -0,000004 (\bar{6}, 6234206), \\
\overline{(m'', m'')}_1 [(p' - p'')^3 + (p' - p'')(q' - q'')^2 - 2q'(p'q'' - p''q')] &= -0,000006 (\bar{6}, 7897563), \\
\frac{1}{6}(m'', m'')_4 [(p' - p'')^3 + (p' - p'')(q' - q'')^2 - 2p'(p'q'' - p''q')] &= 0,000006 (\bar{6}, 8107986), \\
(m'', m'')_{10} [2l''l'(p' - p'') + (h'l'' + h''l')q'' - 2l''h'q'] &= -0,000011 (\bar{5}, 0280064), \\
(m'', m'')_{11} [2l''l'(p' - p'') + (h'l'' + h''l')q'' - 2l''h'q'] &= -0,000011 (\bar{5}, 0602186), \\
(m'', m'')_{12} [2l''l'(p' - p'') + (h'l'' + h''l')q'' - 2l''h'q'] &= 0,000000 (\bar{7}, 0985132), \\
\frac{1}{2}(m'', m'') (p' - p'') (l'^2 + h'^2 + 3p''^2 + 3q''^2) &= 0,000002 (\bar{6}, 2681262).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000055.

Земля и Уранъ.

$$\begin{aligned}
& -(m''m^{VI})(p^{VI}-p'') = -0,000095(\bar{5},9993187), \\
& \frac{1}{2}(m''m^{VI})[2(p^{VI}-p'')(q^{VI}q''+p^{VI}p'')-p^{VI}(q''-q^{VI})^2+(p''-p^{VI})^2-3p''(p^{VI2}-p''^2)-3q''(q^{VI}p^{VI}-q''p'')] \\
& \quad = -0,000000(\bar{9},9600748), \\
& (m''m^{VI})_4[l^{VI2}+h^{VI2}+l''^2+h''^2](p^{VI}-p'') = -0,000000(\bar{9},0019151), \\
& (m''m^{VI})_4(p^{VI}-p'')[l^{VI2}+h^{VI2}+l''^2+h''^2] = 0,000000(\bar{7},5693564), \\
& (m''m^{VI})_2[(l^{VI2}-h^{VI2})(p^{VI}-p'')-2l^{VI}h^{VI}(q^{VI}-q'')] = -0,000000(\bar{8},7505760), \\
& (m''m^{VI})[(l^{VI2}-h^{VI2})(p-p'')-2l^{VI}h^{VI}(q^{VI}-q'')] = 0,000000(\bar{8},7438538), \\
& (m''m^{VI})_{13}[(l''^2-h''^2)(p^{VI}-p'')-2l''h''(q^{VI}-q'')] = 0,000000(\bar{8},2548439), \\
& (m''m^{VI})_{14}[(l''^2-h''^2)(p^{VI}-p'')-2l''h''(q^{VI}-q'')] = -0,000000(\bar{8},6234871), \\
& 2(m''m^{VI})_{15}[(l''l^{VI}+h''h^{VI})(p^{VI}-p'')+(h^{VI}l''-h''l^{VI})q^{VI}] = -0,000000(\bar{7},9945261), \\
& 2(m''m^{VI})_{16}[(l''l^{VI}+h''h^{VI})(p^{VI}-p'')+(h^{VI}l''-h''l^{VI})q^{VI}] = 0,000000(\bar{7},9982252), \\
& \frac{1}{3}(m''m^{VI})_4[(p^{VI}-p'')^3+(p^{VI}-p'')(q^{VI}-q'')^2+q^{VI}(p^{VI}q''-p''q^{VI})] = 0,000000(\bar{9},9640587), \\
& (m''m^{VI})_1[(p^{VI}-p'')^3+(p^{VI}-p'')(q^{VI}-q'')^2+q^{VI}(p^{VI}q''-p''q^{VI})] = -0,000000(\bar{11},8737382), \\
& (m''m^{VI})_1[(p^{VI}-p'')^3+(p^{VI}-p'')(q^{VI}-q'')^2-2q^{VI}(p^{VI}q''-p''q^{VI})] = -0,000000(\bar{9},6579567), \\
& \frac{1}{6}(m''m^{VI})_2[(p^{VI}-p'')^3+(p^{VI}-p'')(q^{VI}-q'')^2-2q^{VI}(p^{VI}q''-p''q^{VI})] = 0,000000(\bar{9},6630281), \\
& (m''m^{VI})_{10}[2l''l^{VI}(p^{VI}-p'')+(h^{VI}l''+h''l^{VI})q''-2l''h^{VI}q^{VI}] = 0,000000(\bar{7},5340361), \\
& (m''m^{VI})_{11}[2l''l^{VI}(p^{VI}-p'')+(h^{VI}l''+h''l^{VI})q''-2l''h^{VI}q^{VI}] = 0,000000(\bar{7},5420017), \\
& (m''m^{VI})_{12}[2l''l^{VI}(p^{VI}-p'')+(h^{VI}l''+h''l^{VI})q''-2l''h^{VI}q^{VI}] = -0,000000(\bar{9},0251248), \\
& \frac{1}{2}(m''m^{VI})(p^{VI}-p'')(l''^2+h''^2+3p''^2+3q''^2) = 0,000000(\bar{8},1485378).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Марсъ и Меркурій.

$$\begin{aligned}
& -(m'''m)(p-p''') = -0,000810(\bar{4},9083224), \\
& \frac{1}{2}(m'''m)[2(p-p''')(qq'''+pp''')-p((q-q''')^2+(p-p''')^2)-3p'''(p^2-p'''^2)-3q'''(qp-q'''p''')] \\
& \quad = -0,000007(\bar{6},8745219) \\
& (m'''m)_1(p-p''')[l^2+h^2+l'''^2+h'''^2] = -0,000004(\bar{6},6015435), \\
& (m'''m)_4(p-p''')[l^2+h^2+l'''^2+h'''^2] = 0,000077(\bar{5},8873356), \\
& (m'''m)_2[(l^2-h^2)(p-p''')-2lh(q-q''')] = 0,000013(\bar{5},1038665),
\end{aligned}$$

$$\begin{aligned}
\overline{(m, m)} [(l^2 - h^2)(p - p''') - 2lh(q - q''')] &= -0,000007 (\bar{6}, 8765442), \\
(m, m)_{13} [(l''^2 - h''^2)(p - p''') - 2l''h''(q - q''')] &= -0,000008 (\bar{6}, 9115777), \\
(m, m)_{14} [(l''^2 - h''^2)(p - p''') - 2l''h''(q - q''')] &= 0,000020 (\bar{5}, 2961194), \\
2(m, m)_{15} [(ll'' + hh'')(p - p''') + (hl'' - h''l)q] &= -0,000067 (\bar{5}, 8270265), \\
2(m, m)_{16} [ll'' + hh''(p - p''') + (hl'' - h''l)q] &= 0,000083 (\bar{5}, 9219133), \\
\frac{1}{3}(m, m)_4 [(p - p''')^3 + (p - p''')(q - q''')^2 + q(pq''' - p'''q)] &= 0,000004 (\bar{6}, 6062661), \\
(m, m)_4 [(p - p''')^3 + (p - p''')(q - q''')^2 + q(pq''' - p'''q)] &= -0,000000 (\bar{7}, 7975953), \\
\overline{(m, m)}_1 [(p - p''')^3 + (p - p''')(q - q''')^2 - 2q(pq''' - p'''q)] &= -0,000002 (\bar{6}, 2058690), \\
\frac{1}{6}(m, m)_4 [(p - p''')^3 + (p - p''')(q - q''')^2 - 2q(pq''' - p'''q)] &= 0,000002 (\bar{6}, 3347853), \\
(m, m)_{10} [2ll''(p - p''') + (hl'' + h''l)q''' - 2l''hq] &= -0,000055 (\bar{5}, 7440753), \\
(m, m)_{11} [2ll''(p - p''') + (hl'' + h''l)q''' - 2l''hq] &= -0,000086 (\bar{5}, 9334798), \\
(m, m)_{12} [2ll''(p - p''') + (hl'' + h''l)q''' - 2l''hq] &= 0,000005 (\bar{6}, 7445988), \\
\frac{1}{2}(m, m)(p - p''')[l''^2 + h''^2 + 3p''^2 + 3q''^2] &= 0,000005 (\bar{6}, 6800532).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000121.

Марсъ и Венера.

$$\begin{aligned}
-(m, m')(p' - p''') &= -0,015559 (\bar{2}, 1919925), \\
\frac{1}{2}(m, m')[2(p' - p''')(q'q''' + p'p''') - p'((q' - q''')^2 + (p' - p''')^2) - 3p'''(p'^2 - p''^2) - 3q'''(q'p' - q'''p''')] & \\
&= -0,000040 (\bar{5}, 5991308), \\
(m, m')_4 (p' - p''')[l'^2 + h'^2 + l''^2 + h''^2] &= -0,000076 (\bar{5}, 8841006), \\
(m, m')_4 (p' - p''')[l'^2 + h'^2 + l''^2 + h''^2] &= 0,000453 (\bar{4}, 6564259), \\
(m, m')_2 [(l'^2 - h'^2)(p' - p''') - 2l'h'(q' - q''')] &= 0,000000 (\bar{7}, 0503596), \\
\overline{(m, m')}_1 [(l'^2 - h'^2)(p' - p''') - 2l'h'(q' - q''')] &= 0,000000 (\bar{8}, 8818016), \\
(m, m')_{13} [(l''^2 - h''^2)(p' - p''') - 2l''h''(q' - q''')] &= -0,000066 (\bar{5}, 8226331), \\
(m, m')_{14} [(l''^2 - h''^2)(p' - p''') - 2l''h''(q' - q''')] &= 0,000365 (\bar{4}, 5629391), \\
2(m, m')_{15} [(l'l'' + h'h'')(p' - p''') + q'(h'l'' - h''l')] &= 0,000013 (\bar{5}, 1285001), \\
2(m, m')_{16} [(l'l'' + h'h'')(p' - p''') + q'(h'l'' - h''l')] &= -0,000035 (\bar{5}, 5485609), \\
\frac{1}{3}(m, m')_4 [(p' - p''')^3 + (p' - p''')(q' - q''')^2 + q'(p'q''' - p'''q')] &= 0,000027 (\bar{5}, 4260550), \\
(m, m')_4 [(p' - p''')^3 + (p' - p''')(q' - q''')^2 + q'(p'q''' - p'''q')] &= -0,000013 (\bar{5}, 1308510),
\end{aligned}$$

$$\overline{(m''', m')}_1 [(p' - p''')^3 + (p' - p''')(q' - q''')^2 - 2q'(p'q'' - p'''q')] = -0,000000(7,9051749),$$

$$\frac{1}{6}(m''', m')_4 [(p' - p''')^3 + (p' - p''')(q' - q''')^2 - 2q'(p'q'' - p'''q')] = 0,000003(6,4566968),$$

$$(m''', m')_{10} [2l'l'''(p' - p''') + (h'l''' + h'''l')q'' - 2l''h'q'] = -0,000009(6,9830660),$$

$$(m''', m')_{11} [2l'l'''(p' - p''') + (h'l''' + h'''l')q'' - 2l''h'q'] = -0,000045(5,6587776),$$

$$(m''', m')_{12} [2l'l'''(p' - p''') + (h'l''' + h'''l')q'' - 2l''h'q'] = 0,000008(6,9061579),$$

$$\frac{1}{2}(m''', m')(p' - p''')(l'''^2 + h'''^2 + 3p'''^2 + 3q'''^2) = 0,000092(5,9637233).$$

Слѣд. сумма членовъ третьяго порядка = 0,000931.

Марсъ и Земля.

$$-(m''', m'')(p'' - p''') = 0,043295(2,6364419),$$

$$\frac{1}{2}(m''', m'')[2(p'' - p''')(q''q''' + p''p''') - p''((q'' - q''')^2 + (p'' - p''')^2) - 3p'''(p''^2 - p'''^2) - 3q'''(q''p'' - q'''p''')] = 0,000068(5,8317438),$$

$$(m''', m'')_1 (p'' - p''') [l''^2 + h''^2 + l'''^2 + h'''^2] = 0,000774(4,8889593),$$

$$(m''', m'')_4 (p'' - p''') [l''^2 + h''^2 + l'''^2 + h'''^2] = -0,003031(3,4816004),$$

$$(m''', m'')_2 [(l''^2 - h''^2)(p'' - p''') - 2l''h''(q'' - q''')] = -0,000007(6,8390321),$$

$$\overline{(m''', m'')} [(l''^2 - h''^2)(p'' - p''') - 2l''h''(q'' - q''')] = -0,000014(5,1631384),$$

$$(m''', m''')_{13} [(l'''^2 - h'''^2)(p'' - p''') - 2l'''h'''(q'' - q''')] = 0,000637(4,8043015),$$

$$(m''', m'')_{14} [(l'''^2 - h'''^2)(p'' - p''') - 2l'''h'''(q'' - q''')] = -0,001790(3,2530179),$$

$$2(m''', m'')_{15} [(l'l''' + h'h''')(p'' - p''') + (h'l''' - h'''l')q''] = -0,000000(7,4478755),$$

$$2(m''', m'')_{16} [(l'l''' + h'h''')(p'' - p''') + (h'l''' - h'''l')q''] = 0,000366(4,5638439),$$

$$\frac{1}{3}(m''', m'')_4 [(p'' - p''')^3 + (p'' - p''')(q'' - q''')^2 + q''(p''q''' - p'''q'')] = -0,000176(4,2469186),$$

$$(m''', m'')_1 [(p'' - p''')^3 + (p'' - p''')(q'' - q''')^2 + q''(p''q''' - p'''q'')] = 0,000090(5,9553075),$$

$$\overline{(m''', m'')} [(p'' - p''')^3 + (p'' - p''')(q'' - q''')^2 - 2q''(p''q''' - p'''q'')] = -0,000004(6,5709683),$$

$$\frac{1}{6}(m''', m'')_4 [(p'' - p''')^3 + (p'' - p''')(q'' - q''')^2 - 2p''(p''q''' + q''p''')] = -0,000059(5,7697973),$$

$$(m''', m'')_{10} [2l'l'''(p'' - p''') + (h'l''' + h'''l')q'' - 2l''h''q''] = 0,000027(5,4342206),$$

$$(m''', m'')_{11} [2l'l'''(p'' - p''') + (h'l''' + h'''l')q'' - 2l''h''q''] = 0,000650(4,8132096),$$

$$(m''', m'')_{12} [2l'l'''(p'' - p''') + (h'l''' + h'''l')q'' - 2l''h''q''] = -0,000169(4,2282760),$$

$$\frac{1}{2}(m''', m'')(p'' - p''')(l'''^2 + h'''^2 + 3p'''^2 + 3q'''^2) = -0,000256(4,4081727).$$

Слѣд. сумма членовъ третьяго порядка = -0,006852.

Марсъ и Юпитеръ.

$$\begin{aligned}
 &-(m''', m^{IV})(p^{IV} - p''') = 0,019427 (\bar{2}, 2884219), \\
 &\frac{1}{2}(m''', m^{IV})[2(p^{IV} - p''')(q^{IV} q''' + p^{IV} p''') - p^{IV}((q^{IV} - q''')^2 + (p^{IV} - p''')^2) - 3p'''(p^{IV2} - p''')^2) - 3q'''(q^{IV} p^{IV} - q''' p''')] \\
 &= 0,000202 (\bar{4}, 3065495), \\
 &(m''', m^{IV})_1(p^{IV} - p''')[l^{IV2} + h^{IV2} + l'''^2 + h'''^2] = 0,000033 (\bar{5}, 5174281), \\
 &(m''', m^{IV})_4[l^{IV2} + h^{IV2} + l'''^2 + h'''^2](p^{IV} - p''') = -0,000430 (\bar{4}, 6338412), \\
 &(m''', m^{IV})_2[(l^{IV2} - h^{IV2})(p^{IV} - p''') - 2l^{IV}h^{IV}(q^{IV} - q''')] = -0,000078 (\bar{5}, 8937581), \\
 &(\overline{m''', m^{IV}})[(l^{IV2} - h^{IV2})(p^{IV} - p''') - 2l^{IV}h^{IV}(q^{IV} - q''')] = 0,000034 (\bar{5}, 5379991), \\
 &(m''', m^{IV})_{13}[(l'''^2 - h'''^2)(p^{IV} - p''') - 2l'''h'''(q^{IV} - q''')] = -0,003326 (\bar{3}, 5219011), \\
 &(m''', m^{IV})_{14}[(l'''^2 - h'''^2)(p^{IV} - p''') - 2h'''l'''(q^{IV} - q''')] = 0,005370 (\bar{3}, 7300236), \\
 &2(m''', m^{IV})_{15}[(l^{IV}l''' + h^{IV}h''')(p^{IV} - p''') + (h^{IV}l''' - h'''l^{IV})q^{IV}] = 0,000706 (\bar{4}, 8487727), \\
 &2(m''', m^{IV})_{16}[(l^{IV}l''' + h^{IV}h''')(p^{IV} - p''') + (h^{IV}l''' - h'''l^{IV})q^{IV}] = -0,000951 (\bar{4}, 9783672), \\
 &\frac{1}{3}(m''', m^{IV})_4[(p^{IV} - p''')^3 + (p^{IV} - p''')(q^{IV} - q''')^2 + q^{IV}(p^{IV} q''' - p''' q^{IV})] = -0,000027 (\bar{5}, 4311788), \\
 &(m''', m^{IV})_1[(p^{IV} - p''')^3 + (p^{IV} - p''')(q^{IV} - q''')^2 + q^{IV}(p^{IV} q''' - p''' q^{IV})] = 0,000006 (\bar{6}, 7918870), \\
 &(\overline{m''', m^{IV}})_1[(p^{IV} - p''')^3 + (p^{IV} - p''')(q^{IV} - q''')^2 - 2q^{IV}(p^{IV} q''' - p''' q^{IV})] = -0,000009 (\bar{6}, 9961827), \\
 &\frac{1}{6}(m''', m^{IV})_4[(p^{IV} - p''')^3 + (p^{IV} - p''')(q^{IV} - q''')^2 - 2q^{IV}(p^{IV} q''' - p''' q^{IV})] = 0,000015 (\bar{5}, 1708230), \\
 &(m''', m^{IV})_{10}[2l'''l^{IV}(p^{IV} - p''') + (h^{IV}l''' + h'''l^{IV})q''' - 2l'''h^{IV}q^{IV}] = -0,000922 (\bar{4}, 9648286), \\
 &(m''', m^{IV})_{11}[2l'''l^{IV}(p^{IV} - p''') + (h^{IV}l''' + h'''l^{IV})q''' - 2l'''h^{IV}q^{IV}] = -0,001647 (\bar{3}, 2168551), \\
 &(m''', m^{IV})_{12}[2l'''l^{IV}(p^{IV} - p''') + (h^{IV}l''' + h'''l^{IV})q''' - 2l'''h^{IV}q^{IV}] = 0,000137 (\bar{4}, 1360773), \\
 &\frac{1}{2}(m''', m^{IV})(p^{IV} - p''')(l'''^2 + h'''^2 + 3p'''^2 + 3q'''^2) = -0,000115 (\bar{4}, 0601527).
 \end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,009324.

Марсъ и Сатурнъ.

$$\begin{aligned}
 &-(m''', m^V)(p^V - p''') = -0,010304 (\bar{2}, 0130176), \\
 &\frac{1}{2}(m''', m^V)[2(p^V - p''')(q^V q''' + p^V p''') - p^V((q^V - q''')^2 + (p^V - p''')^2) - 3p'''(p^{V2} - p''')^2) - 3q'''(q^V p^V - q''' p''')] \\
 &= -0,000015 (\bar{5}, 1810358), \\
 &(m''', m^V)_1(p^V - p''')(l^{V2} + h^{V2} + l'''^2 + h'''^2) = -0,000005 (\bar{6}, 6917709), \\
 &(m''', m^V)_4(p^V - p''')(l^{V2} + h^{V2} + l'''^2 + h'''^2) = 0,000199 (\bar{4}, 3000683), \\
 &(m''', m^V)_2[(l^{V2} - h^{V2})(p^V - p''') - 2l^Vh^V(q^V - q''')] = 0,000008 (\bar{6}, 8902038),
 \end{aligned}$$

*

$$\begin{aligned}
\overline{(m'', m'')} [(l'^2 - h'^2)(p' - p''') - 2l'h'(q' - q'')] &= -0,000006 (\bar{6}, 8192684), \\
(m'', m'')_{13} [(l''^2 - h''^2)(p' - p''') - 2l''h''(q' - q'')] &= 0,000093 (\bar{5}, 9704558), \\
(m'', m'')_{14} [(l''^2 - h''^2)(p' - p''') - 2l''h''(q' - q'')] &= -0,000221 (\bar{4}, 3446189), \\
2(m'', m'')_{15} [(l''l' + h''h')(p' - p''') + (h'l'' - h''l')q'] &= 0,000454 (\bar{4}, 6568654), \\
2(m'', m'')_{16} [(l''l' + h''h')(p' - p''') + (h'l'' - h''l')q'] &= -0,000493 (\bar{4}, 6925896), \\
\frac{1}{3}(m'', m'')_4 [(p' - p''')^3 + (p' - p''')(q' - q'')^2 + q'(p'q'' - p''q')] &= 0,000002 (\bar{6}, 4006417), \\
(m'', m'')_1 [(q' - q'')^3 + (p' - p''')(q' - q'')^2 + q'(p'q'' - p''q')] &= -0,000000 (\bar{7}, 2694656), \\
\overline{(m'', m'')} [(p' - p''')^3 + (p' - p''')(q' - q'')^2 - 2q'(p'q'' - p''q')] &= -0,000010 (\bar{5}, 0242312), \\
\frac{1}{6}(m'', m'')_4 [(p' - p''')^3 + (p' - p''')(q' - q'')^2 - 2p'(p'q'' - p''q')] &= 0,000012 (\bar{5}, 0736085), \\
(m'', m'')_{10} [2l''l'(p' - p''') + (h'l'' + h''l')q'' - 2l''h'q'] &= 0,000433 (\bar{4}, 6369916), \\
(m'', m'')_{11} [2l''l'(p' - p''') + (h'l'' + h''l')q'' - 2l''h'q'] &= 0,000515 (\bar{4}, 7117774), \\
(m'', m'')_{12} [2l''l'(p' - p''') + (h'l'' + h''l')q'' - 2l''h'q'] &= -0,000014 (\bar{5}, 1493954), \\
\frac{1}{2}(m'', m'')(p' - p''')(l'^2 + h'^2 + 3p''^2 + 3q''^2) &= 0,000061 (\bar{5}, 7847484).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = -0,000258.

Марсъ и Уранъ.

$$\begin{aligned}
-(m'', m'^I)(p'^I - p''') &= 0,000162 (\bar{4}, 2103626), \\
\frac{1}{2}(m'', m'^I) [2(p'^I - p''')(q'^I q'' + p'^I p''') - p'^I(q'' - q'^I)^2 + (p''' - p'^I)^2 - 3p'''(p'^I - p''') - 3q'''(q'^I p'^I - q''p''')] &= 0,000000 (\bar{7}, 4225958), \\
(m'', m'^I)_1 [l'^I + h'^I + l''^2 + h''^2](p'^I - p''') &= 0,000000 (\bar{8}, 2277942), \\
(m'', m'^I)_4 (p'^I - p''') [l'^I + h'^I + l''^2 + h''^2] &= -0,000003 (\bar{6}, 4315801), \\
(m'', m'^I)_2 [(l'^I - h'^I)(p'^I - p''') - 2l'^I h'^I (q'^I - q'')] &= 0,000000 (\bar{7}, 1464611), \\
\overline{(m'', m'^I)} [(l'^I - h'^I)(p' - p''') - 2l'^I h'^I (q'^I - q'')] &= -0,000000 (\bar{7}, 1305931), \\
(m'', m'^I)_{13} [(l''^2 - h''^2)(p'^I - p''') - 2l''h''(q'^I - q'')] &= 0,000002 (\bar{6}, 3029218), \\
(m'', m'^I)_{14} [(l''^2 - h''^2)(p'^I - p''') - 2l''h''(q'^I - q'')] &= -0,000003 (\bar{6}, 4724433), \\
2(m'', m'^I)_{15} [(l''l'^I + h''h'^I)(p'^I - p''') + (h'l'' - h''l')q'^I] &= -0,000008 (\bar{6}, 8896652), \\
2(m'', m'^I)_{16} [(l''l'^I + h''h'^I)(p'^I - p''') + (h'l'' - h''l')q'^I] &= 0,000008 (\bar{6}, 8982938), \\
\frac{1}{3}(m'', m'^I)_4 [(p'^I - p''')^3 + (p'^I - p''')(q'^I - q'')^2 + q'^I(p'^I q'' - p''q'^I)] &= -0,000000 (\bar{8}, 4872056), \\
(m'', m'^I)_1 [(p'^I - p''')^3 + (p'^I - p''')(q'^I - q'')^2 + q'^I(p'^I q'' - p''q'^I)] &= 0,000000 (\bar{10}, 7605410),
\end{aligned}$$

$$\begin{aligned}
(\overline{m''m'''})_1 [(p''-p''')^3 + (p''-p''')(q''-q''')^2 - 2q''(p''q'''-p'''q'')] &= 0,000000 (\bar{8},3596586), \\
\frac{1}{6}(\overline{m''m'''})_4 [(p''-p''')^3 + (p''-p''')(q''-q''')^2 - 2q''(p''q'''-p'''q'')] &= -0,000000 (\bar{8},3716743), \\
(\overline{m''m'''})_{10} [2l''l'''(p''-p''') + (h''l''' + h'''l'')q''' - 2l''h''l'''q'''] &= 0,000021 (\bar{5},3237048), \\
(\overline{m''m'''})_{11} [2l''l'''(p''-p''') + (h''l''' + h'''l'')q''' - 2l''h''l'''q'''] &= 0,000022 (\bar{5},3421978), \\
(\overline{m''m'''})_{12} [2l''l'''(p''-p''') + (h''l''' + h'''l'')q''' - 2l''h''l'''q'''] &= -0,000000 (\bar{7},1882138), \\
\frac{1}{2}(\overline{m''m'''}) (p''-p''') (l''^2 + h''^2 + 3p''^2 + 3q''^2) &= -0,000000 (\bar{7},9820934).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000009$.

Юпитеръ и Меркурій.

$$\begin{aligned}
-(m^{IV}m)(p-p^{IV}) &= -0,000010 (\bar{5},0006319), \\
\frac{1}{2}(m^{IV}m) [2(p-p^{IV})(qq^{IV}+pp^{IV}) - p((q-q^{IV})^2 + (p-p^{IV})^2) - 3p^{IV}(p^2-p^{IV2}) - 3q^{IV}(qp-q^{IV}p^{IV})] &= -0,000000 (\bar{8},9861254) \\
(m^{IV}m)_1 (p-p^{IV}) [l^2 + h^2 + l^{IV2} + h^{IV2}] &= -0,000000 (\bar{9},5740100), \\
(m^{IV}m)_4 (p-p^{IV}) [l^2 + h^2 + l^{IV2} + h^{IV2}] &= 0,000000 (\bar{7},8341394), \\
(\overline{m^{IV}m})_2 [(l^2 - h^2)(p-p^{IV}) - 2lh(q-q^{IV})] &= 0,000000 (\bar{7},2196661), \\
(\overline{m^{IV}m}) [(l^2 - h^2)(p-p^{IV}) - 2lh(q-q^{IV})] &= -0,000000 (\bar{7},4212516), \\
(m^{IV}m)_{13} [(l^{IV2} - h^{IV2})(p-p^{IV}) - 2l^{IV}h^{IV}(q-q^{IV})] &= -0,000000 (\bar{9},8610548), \\
(m^{IV}m)_{14} [(l^{IV2} - h^{IV2})(p-p^{IV}) - 2l^{IV}h^{IV}(q-q^{IV})] &= 0,000000 (\bar{8},2308863), \\
2(m^{IV}m)_{15} [(ll^{IV} + hh^{IV})(p-p^{IV}) + (hl^{IV} - h^{IV}l)q] &= -0,000002 (\bar{6},3326044), \\
2(m^{IV}m)_{16} [(ll^{IV} + hh^{IV})(p-p^{IV}) + (hl^{IV} - h^{IV}l)q] &= 0,000002 (\bar{6},3401681), \\
\frac{1}{3}(m^{IV}m)_4 [(p-p^{IV})^3 + (p-p^{IV})(q-q^{IV})^2 + q(pq^{IV} - p^{IV}q)] &= 0,000000 (\bar{8},6746655), \\
(m^{IV}m)_4 [(p-p^{IV})^3 + (p-p^{IV})(q-q^{IV})^2 + q(pq^{IV} - p^{IV}q)] &= -0,000000 (\bar{10},8916574), \\
(\overline{m^{IV}m})_4 [(p-p^{IV})^3 + (p-p^{IV})(q-q^{IV})^2 - 2q(pq^{IV} - p^{IV}q)] &= -0,000000 (\bar{8},6578765) \\
\frac{1}{6}(m^{IV}m)_4 [(p-p^{IV})^3 + (p-p^{IV})(q-q^{IV})^2 - 2q(pq^{IV} - p^{IV}q)] &= 0,000000 (\bar{8},6618843) \\
(m^{IV}m)_{10} [2ll^{IV}(p-p^{IV}) + (hl^{IV} + h^{IV}l)q^{IV} - 2l^{IV}hq] &= -0,000002 (\bar{6},2181843), \\
(m^{IV}m)_{11} [2ll^{IV}(p-p^{IV}) + (hl^{IV} + h^{IV}l)q^{IV} - 2l^{IV}hq] &= -0,000002 (\bar{6},2344102), \\
(m^{IV}m)_{12} [2ll^{IV}(p-p^{IV}) + (hl^{IV} + h^{IV}l)q^{IV} - 2l^{IV}hq] &= 0,000000 (\bar{8},0242449), \\
\frac{1}{2}(m^{IV}m)(p-p^{IV}) [l^{IV2} + h^{IV2} + 3p^{IV2} + 3q^{IV2}] &= 0,000000 (\bar{8},2708331).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $0,000000$.

Юпитеръ и Венера.

$$\begin{aligned}
& -(m^{IV} m') (p' - p^{IV}) = -0,000141 (\bar{4}, 1492340), \\
& \frac{1}{2} (m^{IV} m') [2(p' - p^{IV}) (q' q^{IV} + p' p^{IV}) - p' ((q' - q^{IV})^2 + (p' - p^{IV})^2) - 3p^{IV} (p'^2 - p^{IV2}) - 3q^{IV} (q' p' - q^{IV} p^{IV})] \\
& \quad = -0,000000 (\bar{7}, 5645954), \\
& (m^{IV} m')_1 (p' - p^{IV}) (l'^2 + h'^2 + l^{IV2} + h^{IV2}) = -0,000000 (\bar{8}, 0024939), \\
& (m^{IV} m')_4 (p' - p^{IV}) (l'^2 + h'^2 + l^{IV2} + h^{IV2}) = 0,000000 (\bar{7}, 7277555), \\
& (m^{IV} m')_2 [(l'^2 - h'^2) (p' - p^{IV}) - 2l'h' (q' - q^{IV})] = -0,000000 (\bar{10}, 7258253), \\
& \overline{(m^{IV} m')} [(l'^2 - h'^2) (p' - p^{IV}) - 2l'h' (q' - q^{IV})] = 0,000000 (\bar{10}, 6738206), \\
& (m^{IV} m')_{13} [(l^{IV2} - h^{IV2}) (p - p^{IV}) - 2l^{IV} h^{IV} (q' - q^{IV})] = -0,000000 (\bar{7}, 3063088), \\
& (m^{IV} m')_{14} [(l^{IV2} - h^{IV2}) (p' - p^{IV}) - 2l^{IV} h^{IV} (q' - q^{IV})] = 0,000000 (\bar{7}, 6789868), \\
& 2(m^{IV} m')_{15} [(l'l^{IV} + h'h^{IV}) (p' - p^{IV}) + (h'l^{IV} - h'l^{IV}) q'] = 0,000000 (\bar{8}, 3450152), \\
& 2(m^{IV} m')_{16} [(l'l^{IV} + h'h^{IV}) (p' - p^{IV}) + (h'l^{IV} - h'l^{IV}) q'] = -0,000000 (\bar{8}, 3718781), \\
& \frac{1}{3} (m^{IV} m')_4 [(p' - p^{IV})^3 + (p' - p^{IV}) (q' - q^{IV})^2 + q' (p' q^{IV} - p^{IV} q')] = 0,000000 (\bar{8}, 9910718), \\
& (m^{IV} m')_1 [(p' - p^{IV})^3 + (p' - p^{IV}) (q' - q^{IV})^2 + q' (p' q^{IV} - p^{IV} q')] = -0,000000 (\bar{9}, 7429315), \\
& \overline{(m^{IV} m')}_1 [(p' - p^{IV})^3 + (p' - p^{IV}) (q' - q^{IV})^2 - 2q' (p' q^{IV} - p^{IV} q')] = -0,000000 (\bar{8}, 8464936), \\
& \frac{1}{6} (m^{IV} m')_4 [(p' - p^{IV})^3 + (p' - p^{IV}) (q' - q^{IV})^2 - 2q' (p' q^{IV} - p^{IV} q')] = 0,000000 (\bar{8}, 8837264), \\
& (m^{IV} m')_{10} [2l'l^{IV} (p' - p^{IV}) + (h'l^{IV} + h^{IV} l') q^{IV} - 2l^{IV} h' q'] = -0,000000 (\bar{7}, 6292057), \\
& (m^{IV} m')_{11} [2l'l^{IV} (p' - p^{IV}) + (h'l^{IV} + h^{IV} l') q^{IV} - 2l^{IV} h' q'] = -0,000000 (\bar{7}, 6858559), \\
& (m^{IV} m')_{12} [2l'l^{IV} (p' - p^{IV}) + (h'l^{IV} + h^{IV} l') q^{IV} - 2l^{IV} h' q'] = 0,000000 (\bar{8}, 0077255), \\
& \frac{1}{2} (m^{IV} m') (p' - p^{IV}) [l'^2 + h'^2 + 3q^{IV2} + 3p^{IV2}] = -0,000000 (\bar{7}, 4194352),
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Юпитеръ и Земля.

$$\begin{aligned}
& -(m^{IV} m'') (p'' - p^{IV}) = 0,000205 (\bar{4}, 3119600), \\
& \frac{1}{2} (m^{IV} m'') [2(p'' - p^{IV}) (q'' q^{IV} + p'' p^{IV}) - p'' ((q'' - q^{IV})^2 + (p'' - p^{IV})^2) - 3p^{IV} (p''^2 - p^{IV2}) - 3q^{IV} (q'' p'' - q^{IV} p^{IV})] \\
& \quad = 0,000000 (\bar{7}, 2093558), \\
& (m^{IV} m')_1 (p' - p^{IV}) [l'^2 + h'^2 + l^{IV2} + h^{IV2}] = -0,000000 (\bar{8}, 5035250), \\
& (m^{IV} m'')_4 (p'' - p^{IV}) [l'^2 + h'^2 + l^{IV2} + h^{IV2}] = 0,000000 (\bar{7}, 9577752), \\
& (m^{IV} m'')_2 [(l'^2 - h'^2) (p'' - p^{IV}) - 2l'h' (q'' - q^{IV})] = -0,000000 (\bar{8}, 1756053),
\end{aligned}$$

$$\begin{aligned}
(\overline{m^{IV}m})[(l''^2 - h''^2)(p'' - p^{IV}) - 2l''h''(q'' - q^{IV})] &= 0,000000(\bar{8},0661863), \\
(m^{IV}m'')_{13}[(l^{IV2} - h^{IV2})(p'' - p^{IV}) - 2l^{IV}h^{IV}(q'' - q^{IV})] &= 0,000000(\bar{7},5718319), \\
(m^{IV}m'')_{14}[(l^{IV2} - h^{IV2})(p'' - p^{IV}) - 2l^{IV}h^{IV}(q'' - q^{IV})] &= -0,000000(\bar{7},9487134), \\
2(m^{IV}m'')_{15}[(l''l^{IV} + h''h^{IV})(p'' - p^{IV}) + (h''l^{IV} - l''h^{IV})q''] &= 0,000000(\bar{8},3896665), \\
2(m^{IV}m'')_{16}[(l''l^{IV} + h''h^{IV})(p'' - p^{IV}) + (h''l^{IV} - l''h^{IV})q''] &= -0,000000(\bar{8},4421256), \\
\frac{1}{3}(m^{IV}m'')_4[(p'' - p^{IV})^3 + (p'' - p^{IV})(q'' - q^{IV})^2 + q''(p''q^{IV} - p^{IV}q'')] &= -0,000000(\bar{8},7867176), \\
(m^{IV}m'')_4[(p'' - p^{IV})^3 + (p'' - p^{IV})(q'' - q^{IV})^2 + q''(p''q^{IV} - p^{IV}q'')] &= 0,000000(\bar{9},8095887), \\
(\overline{m^{IV}m'')}_4[(p'' - p^{IV})^3 + (p'' - p^{IV})(q'' - q^{IV})^2 - 2q''(p''q^{IV} - p^{IV}q'')] &= 0,000000(\bar{8},4135635), \\
\frac{1}{6}(m^{IV}m'')_4[(p'' - p^{IV})^3 + (p'' - p^{IV})(q'' - q^{IV})^2 - 2q''(p''q^{IV} - p^{IV}q'')] &= -0,000000(\bar{8},4856876), \\
(m^{IV}m'')_{10}[2l''l^{IV}(p'' - p^{IV}) + (h''l^{IV} + h^{IV}l'')q^{IV} - 2l^{IV}h''q''] &= 0,000000(\bar{8},9982418), \\
(m^{IV}m'')_{11}[2l''l^{IV}(p'' - p^{IV}) + (h''l^{IV} + l''h^{IV})q^{IV} - 2l^{IV}h''q''] &= 0,000000(\bar{7},1065413), \\
(m^{IV}m'')_{12}[2l''l^{IV}(p'' - p^{IV}) + (h''l^{IV} + l''h^{IV})q^{IV} - 2l^{IV}h''q''] &= -0,000000(\bar{9},6960468), \\
\frac{1}{2}(m^{IV}m'')(p'' - p^{IV})[l^{IV2} + h^{IV2} + 3p^{IV2} + 3q^{IV2}] &= -0,000000(\bar{7},5821612).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Юпитеръ и Марсъ.

$$\begin{aligned}
-(m^{IV}m''')(p''' - p^{IV}) &= -0,000004(\bar{6},6147032), \\
\frac{1}{2}(m^{IV}m''')[2(p''' - p^{IV})(q'''q^{IV} + p'''p^{IV}) - p'''((q''' - q^{IV})^2 + (p''' - p^{IV})^2) - 3p^{IV}(p'''^2 - p^{IV2}) - 3q^{IV}(q'''p''' - q^{IV}p^{IV})] &= -0,000000(\bar{8},2700508), \\
(m^{IV}m''')_4(p''' - p^{IV})[l'''^2 + h'''^2 + l^{IV2} + h^{IV2}] &= -0,000000(\bar{9},8437450), \\
(m^{IV}m''')_4(p''' - p^{IV})[l'''^2 + h'''^2 + l^{IV2} + h^{IV2}] &= 0,000000(\bar{8},9601581), \\
(m^{IV}m''')_2[(l'''^2 - h'''^2)(p''' - p^{IV}) - 2l'''h'''(q''' - q^{IV})] &= -0,000000(\bar{7},2060213), \\
(\overline{m^{IV}m'''})[(l'''^2 - h'''^2)(p''' - p^{IV}) - 2l'''h'''(q''' - q^{IV})] &= 0,000000(\bar{8},8502618), \\
(m^{IV}m''')_{13}[(l^{IV2} - h^{IV2})(p''' - p^{IV}) - 2l^{IV}h^{IV}(q''' - q^{IV})] &= 0,000000(\bar{8},8953778), \\
(m^{IV}m''')_{14}[(l^{IV2} - h^{IV2})(p''' - p^{IV}) - 2l^{IV}h^{IV}(q''' - q^{IV})] &= -0,000000(\bar{7},1035003), \\
2(m^{IV}m''')_{15}[(l'''l^{IV} + h'''h^{IV})(p''' - p^{IV}) + (h'''l^{IV} - h^{IV}l''')q'''] &= 0,000000(\bar{7},7751073), \\
2(m^{IV}m''')_{16}[(l'''l^{IV} + h'''h^{IV})(p''' - p^{IV}) + (l^{IV}h''' - h^{IV}l''')q'''] &= -0,000000(\bar{7},9047018), \\
\frac{1}{3}(m^{IV}m''')_4[(p''' - p^{IV})^3 + (p''' - p^{IV})(q''' - q^{IV})^2 + q'''(p'''q^{IV} - p^{IV}q''')] &= -0,000000(\bar{8},3803332), \\
(m^{IV}m''')_4[(p''' - p^{IV})^3 + (p''' - p^{IV})(q''' - q^{IV})^2 + q'''(p'''q^{IV} - p^{IV}q''')] &= 0,000000(\bar{9},7410414),
\end{aligned}$$

$$\begin{aligned}
(\overline{m^{IV}m^{III}})_1 [(p^{III}-p^{IV})^3 + (p^{III}-p^{IV})(q^{III}-q^{IV})^2 - 2q^{III}(p^{III}q^{IV}-p^{IV}q^{III})] &= -0,000000 (\bar{8},2501878), \\
\frac{1}{6}(\overline{m^{IV}m^{III}})_4 [(q^{III}-q^{IV})^3 + (p^{III}-p^{IV})(q^{III}-q^{IV})^2 - 2q^{III}(p^{III}q^{IV}-p^{IV}q^{III})] &= 0,000000 (\bar{8},4248281), \\
(m^{IV}m^{III})_{10} [2l^{III}l^{IV}(p^{III}-p^{IV}) + (h^{III}l^{IV} + h^{IV}l^{III})q^{IV} - 2l^{IV}h^{III}q^{III}] &= 0,000000 (\bar{7},7885129), \\
(m^{IV}m^{III})_{11} [2l^{IV}l^{III}(p^{III}-p^{IV}) + (h^{III}l^{IV} + h^{IV}l^{III})q^{IV} - 2h^{IV}l^{III}q^{III}] &= 0,000001 (\bar{6},0405400), \\
(m^{IV}m^{III})_{12} [2l^{III}l^{IV^2}(p^{III}-p^{IV}) + (h^{III}l^{IV} + h^{IV}l^{III})q^{IV} - 2l^{IV}h^{III}q^{III}] &= -0,000000 (\bar{8},9597616), \\
\frac{1}{2}(m^{IV}m^{III})(p^{III}-p^{IV})(l^{IV^2} + h^{IV^2} + 3p^{IV^2} + 3q^{IV^2}) &= 0,000000 (\bar{9},8849044).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000001 (\bar{6},0405400)$.

Юпитеръ и Сатурнъ.

$$\begin{aligned}
-(m^{IV}m^V)(p^V-p^{IV}) &= -0,130498 (\bar{1},1156062), \\
\frac{1}{2}(m^{IV}m^V)[2(p^V-p^{IV})(q^{IV}q^V+p^{IV}p^V)-p^V(q^V-q^{IV})^2+(p^V-p^{IV})^2-3p^{IV}(p^{V^2}-p^{IV^2})-3q^{IV}(q^Vp^V-q^{IV}p^{IV})] &= -0,000232 (\bar{4},3656278), \\
(m^{IV}m^V)_1(p^V-p^{IV})[l^{V^2}+h^{V^2}+l^{IV^2}+h^{IV^2}] &= -0,000646 (\bar{4},8100593), \\
(m^{IV}m^V)_4(p^V-p^{IV})[l^{V^2}+h^{V^2}+l^{IV^2}+h^{IV^2}] &= 0,003152 (\bar{3},4985941), \\
(m^{IV}m^V)_2[(l^{V^2}-h^{V^2})(p^V-p^{IV})-2l^Vh^V(q^V-q^{IV})] &= 0,000197 (\bar{4},2950508), \\
(\overline{m^{IV}m^V})[(l^{V^2}-h^{V^2})(p^V-p^{IV})-2l^Vh^V(q^V-q^{IV})] &= 0,000247 (\bar{4},3924974), \\
(m^{IV}m^V)_{13}[(l^{IV^2}-h^{IV^2})(p^V-p^{IV})-2l^{IV}h^{IV}(q^V-q^{IV})] &= -0,000514 (\bar{4},7111576), \\
(m^{IV}m^V)_{14}[(l^{IV^2}-h^{IV^2})(p^V-p^{IV})-2l^{IV}h^{IV}(q^V-q^{IV})] &= 0,001382 (\bar{3},1405441), \\
2(m^{IV}m^V)_{15}[(l^{IV}l^V+h^{IV}h^V)(p^V-p^{IV})+(h^Vl^{IV}-l^Vh^{IV})q^V] &= 0,000316 (\bar{4},5024842), \\
2(m^{IV}m^V)_{16}[(l^{IV}l^V+h^{IV}h^V)(p^V-p^{IV})+(h^Vl^{IV}-l^Vh^{IV})q^V] &= -0,001406 (\bar{3},1480630), \\
\frac{1}{3}(m^{IV}m^V)_4[(p^V-p^{IV})^3+(p^V-p^{IV})(q^V-q^{IV})^2+q^V(p^Vq^{IV}-p^{IV}q^V)] &= 0,000046 (\bar{5},6648295), \\
(m^{IV}m^V)_1[(p^V-p^{IV})^3+(p^V-p^{IV})(q^V-q^{IV})^2+q^V(p^Vq^{IV}-p^{IV}q^V)] &= -0,000028 (\bar{5},4534160), \\
(\overline{m^{IV}m^V})_1[(p^V-p^{IV})^3+(p^V-p^{IV})(q^V-q^{IV})^2-2q^V(p^Vq^{IV}-p^{IV}q^V)] &= -0,000012 (\bar{5},0940872), \\
\frac{1}{6}(m^{IV}m^V)_4[(p^V-p^{IV})^3+(p^V-p^{IV})(q^V-q^{IV})^2-2q^V(p^Vq^{IV}-p^{IV}q^V)] &= 0,000092 (\bar{5},9638157), \\
(m^{IV}m^V)_{10}[2l^{IV}l^V(p^V-p^{IV})+(h^Vl^{IV}+h^{IV}l^V)q^{IV}-2l^{IV}h^Vq^V] &= 0,000364 (\bar{4},5617065), \\
(m^{IV}m^V)_{11}[2l^{IV}l^V(p^V-p^{IV})+(h^Vl^{IV}+h^{IV}l^V)q^{IV}-2l^{IV}h^Vq^V] &= 0,002950 (\bar{3},4698559), \\
(m^{IV}m^V)_{12}[2l^{IV}l^V(p^V-p^{IV})+(h^Vl^{IV}+h^{IV}l^V)q^{IV}-2l^{IV}h^Vq^V] &= -0,000625 (\bar{4},7957025), \\
\frac{1}{2}(m^{IV}m^V)(p^{IV}-p^{IV})(l^{IV^2}+h^{IV^2}+3p^{IV^2}+3q^{IV^2}) &= 0,000243 (\bar{4},3858074).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $0,002964$.

Юпитеръ и Уранъ.

$$\begin{aligned}
& -(m^{IV} m^{VI})(p^{VI} - p^{IV}) = 0,001028 (\bar{3},0123940), \\
& \frac{1}{2}(m^{VI} m^{VI})[2(p^{VI} - p^{IV})(q^{VI} q^{IV} + p^{VI} p^{IV}) - p^{VI}((q^{VI} - q^{IV})^2 + (p^{VI} - p^{IV})^2) - 3p^{IV}(p^{VI2} - p^{IV2}) - 3q^{IV}(q^{VI} p^{VI} - q^{IV} p^{IV})] \\
& \quad = 0,000000 (\bar{7},9662590), \\
& (m^{IV} m^{VI})_1 (p^{VI} - p^{IV}) [l^{VI2} + h^{VI2} + l^{IV2} + h^{IV2}] = 0,000000 (\bar{7},7739548), \\
& (m^{IV} m^{VI})_4 [l^{VI2} + h^{VI2} + l^{IV2} + h^{IV2}] (p^{VI} - p^{IV}) = -0,000009 (\bar{6},9501297), \\
& (m^{IV} m^{VI})_2 [(l^{VI2} - h^{VI2})(p^{VI} - p^{IV}) - 2l^{VI} h^{VI} (q^{VI} - q^{IV})] = 0,000000 (\bar{7},5591361), \\
& \overline{(m^{IV} m^{VI})} [(l^{VI2} - h^{VI2})(p^{VI} - p^{IV}) - 2l^{VI} h^{VI} (q^{VI} - q^{IV})] = -0,000000 (\bar{7},2825778), \\
& (m^{IV} m^{VI})_{13} [(l^{IV2} - h^{IV2})(p^{VI} - p^{IV}) - 2l^{IV} h^{IV} (q^{VI} - q^{IV})] = 0,000002 (\bar{6},3917166), \\
& (m^{IV} m^{VI})_{14} [(l^{IV2} - h^{IV2})(p^{VI} - p^{IV}) - 2h^{IV} l^{IV} (q^{VI} - q^{IV})] = -0,000006 (\bar{6},7770833), \\
& 2(m^{IV} m^{VI})_{15} [(l^{IV} l^{VI} + h^{IV} h^{VI})(p^{VI} - p^{IV}) + (h^{VI} l^{IV} - h^{IV} l^{VI}) q^{VI}] = -0,000022 (\bar{5},3367067), \\
& 2(m^{IV} m^{VI})_{16} [(l^{IV} l^{IV} + h^{IV} h^{VI})(p^{VI} - p^{IV}) + (h^{VI} l^{IV} - h^{IV} l^{VI}) q^{VI}] = 0,000028 (\bar{5},4461126), \\
& \frac{1}{3}(m^{IV} m^{VI})_4 [(p^{VI} - p^{IV})^3 + (p^{VI} - p^{IV})(q^{VI} - q^{IV})^2 + q^{VI}(p^{VI} q^{IV} - p^{IV} q^{VI})] = -0,000000 (\bar{7},1295353), \\
& (m^{IV} m^{VI})_1 [(p^{VI} - p^{IV})^3 + (p^{VI} - p^{IV})(q^{VI} - q^{IV})^2 + q^{VI}(p^{VI} q^{IV} - p^{IV} q^{VI})] = 0,000000 (\bar{8},4304817), \\
& \overline{(m^{IV} m^{VI})}_1 [(p^{VI} - p^{IV})^3 + (p^{VI} - p^{IV})(q^{VI} - q^{IV})^2 - 2q^{VI}(p^{VI} q^{IV} - p^{IV} q^{VI})] = 0,000000 (\bar{9},9537471), \\
& \frac{1}{6}(m^{IV} m^{IV})_4 [(p^{VI} - p^{IV})^3 + (p^{VI} - p^{IV})(q^{VI} - q^{IV})^2 - 2q^{VI}(p^{VI} q^{IV} - p^{IV} q^{VI})] = 0,000000 (\bar{8},1424361), \\
& (m^{IV} m^{VI})_{10} [2l^{IV} l^{VI} (p^{VI} - p^{IV}) + (h^{VI} l^{IV} + h^{IV} l^{VI}) q^{IV} - 2l^{IV} h^{VI} q^{VI}] = 0,000008 (\bar{6},9313641), \\
& (m^{IV} m^{VI})_{11} [2l^{IV} l^{VI} (p^{VI} - p^{IV}) + (h^{IV} l^{IV} + h^{VI} l^{IV}) q^{IV} - 2l^{IV} h^{VI} q^{VI}] = 0,000014 (\bar{5},1473475), \\
& (m^{IV} m^{VI})_{12} [2l^{IV} l^{VI} (p^{VI} - p^{IV}) + (h^{VI} l^{IV} + h^{IV} l^{VI}) q^{IV} - 2l^{IV} h^{VI} q^{VI}] = -0,000001 (\bar{6},0086822), \\
& \frac{1}{2}(m^{IV} m^{VI}) (p^{VI} - p^{IV}) (l^{IV2} + h^{IV2} + 3p^{IV2} + 3q^{IV2}) = -0,000002 (\bar{6},2825952).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000028$.

Сатурнъ и Меркурій.

$$\begin{aligned}
& -(m^I m) (p - p^I) = -0,000000 (\bar{7},9394615), \\
& \frac{1}{2}(m^I m) [2(p - p^I)(qq^I + pp^I) - p((q - q^I)^2 + (p - p^I)^2) - 3p^I(p^2 - p^{I2}) - 3q^I(qp - q^I p^I)] \\
& \quad = -0,000000 (\bar{8},0559649), \\
& (m^I m)_1 (p - p^I) [l^2 + h^2 + l^{I2} + h^{I2}] = -0,000000 (\bar{11},9909784), \\
& (m^I m)_4 (p - p^I) [l^2 + h^2 + l^{I2} + h^{I2}] = 0,000000 (\bar{8},7753096), \\
& (m^I m)_2 [(l^2 - h^2)(p - p^I) - 2lh(q - q^I)] = 0,000000 (\bar{8},2560574),
\end{aligned}$$

$$\begin{aligned}
\overline{(m', m)} [(l^2 - h^2)(p - p') - 2lh(q - q')] &= -0,000000(\bar{8}, 2510017), \\
(m', m)_{13} [(l'^2 - h'^2)(p - p') - 2l'h'(q - q')] &= 0,000000(\bar{9}, 3410164), \\
(m', m)_{14} [(l'^2 - h'^2)(p - p') - 2l'h'(q - q')] &= -0,000000(\bar{9}, 7093971), \\
2(m', m)_{15} [(l'l' + hh')(p - p') + (hl' - h'l)q] &= -0,000000(\bar{7}, 1024626), \\
2(m', m)_{16} [l'l' + hh')(p - p') + (hl' - h'l)q] &= 0,000000(\bar{7}, 1047021), \\
\frac{1}{3}(m', m)_4 [(p - p')^3 + (p - p')(q - q')^2 + q(pq' - p'q)] &= 0,000000(\bar{9}, 2336255), \\
(m', m)_1 [(p - p')^3 + (p - p')(q - q')^2 + q(pq' - p'q)] &= -0,000000(\bar{12}, 9264201), \\
\overline{(m', m)}_1 [(p - p')^3 + (p - p')(q - q')^2 - 2q(pq' - p'q)] &= -0,000000(\bar{9}, 8144789), \\
\frac{1}{6}(m', m)_4 [(p - p')^3 + (p - p')(q - q')^2 - 2q(pq' - p'q)] &= 0,000000(\bar{9}, 8176108), \\
(m', m)_{10} [2l'l'(p - p') + (hl' + h'l)q - 2l'hq] &= -0,000000(\bar{8}, 3524365), \\
(m', m)_{11} [2l'l'(p - p') + (hl' + h'l)q - 2l'hq] &= -0,000000(\bar{8}, 3872638), \\
(m', m)_{12} [2l'l'(p - p') + (hl' + h'l)q - 2l'hq] &= 0,000000(\bar{11}, 6337289), \\
\frac{1}{2}(m', m)(p - p')[l'^2 + h'^2 + 3p'^2 + 3q'^2] &= 0,000000(\bar{9}, 5849280).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Сатурнъ и Венера.

$$\begin{aligned}
-(m', m')(p' - p') &= -0,000008(\bar{6}, 9042935), \\
\frac{1}{2}(m', m')[2(p' - p')(q'q' + p'p') - p'((q' - q')^2 + (p' - p')^2) - 3p'(p'^2 - p'^2) - 3q'(q'p' - q'p')] &= 0,000000(\bar{9}, 7879745), \\
(m', m')_1 (p' - p')[l'^2 + h'^2 + l'^2 + h'^2] &= -0,000000(\bar{10}, 3502135), \\
(m', m')_4 (p' - p')[l'^2 + h'^2 + l'^2 + h'^2] &= 0,000000(\bar{8}, 5935569), \\
(m', m')_2 [(l'^2 - h'^2)(p' - p') - 2l'h'(q' - q')] &= -0,000000(\bar{10}, 1898111), \\
\overline{(m', m')}_1 [(l'^2 - h'^2)(p' - p') - 2l'h'(q' - q')] &= 0,000000(\bar{10}, 1753666), \\
(m', m')_{13} [(l'^2 - h'^2)(p' - p') - 2l'h'(q' - q')] &= 0,000000(\bar{8}, 3060083), \\
(m', m')_{14} [(l'^2 - h'^2)(p' - p') - 2l'h'(q' - q')] &= -0,000000(\bar{8}, 6253933), \\
2(m', m')_{15} [(l'l' + h'h')(p' - p') + q'(h'l' - h'l)] &= -0,000000(\bar{8}, 7435249), \\
2(m', m')_{16} [(l'l' + h'h')(p' - p') + q'(h'l' - h'l)] &= 0,000000(\bar{8}, 7513309), \\
\frac{1}{3}(m', m')_4 [(p' - p')^3 + (p' - p')(q' - q')^2 + q'(p'q' - p'q')] &= -0,000000(\bar{10}, 7645371), \\
(m', m')_1 [(p' - p')^3 + (p' - p')(q' - q')^2 + q'(p'q' - p'q')] &= 0,000000(\bar{12}, 9979150),
\end{aligned}$$

$$\begin{aligned}
\overline{(m', m')}_1 [(p' - p^V)^3 + (p' - p^V)(q' - q^V)^2 - 2q'(p'q^V - p^Vq')] &= -0,000000(\bar{8},9181200), \\
\frac{1}{6}(m', m')_4 [(p' - p^V)^3 + (p' - p^V)(q' - q^V)^2 - 2q'(p'q^V - p^Vq')] &= 0,000000(\bar{9},9290890), \\
(m', m')_{10} [2l'l^V(p' - p^V) + (h'l^V + h^Vl')q^V - 2l^Vh'q'] &= 0,000000(\bar{8},1731984), \\
(m', m')_{11} [2l'l^V(p' - p^V) + (h'l^V + h^Vl')q^V - 2l^Vh'q'] &= 0,000000(\bar{8},1900535), \\
(m', m')_{12} [2l'l^V(p' - p^V) + (h'l^V + h^Vl')q^V - 2l^Vh'q'] &= -0,000000(\bar{10},9962299), \\
\frac{1}{2}(m', m')(p' - p^V)[l'^2 + h'^2 + 3p'^2 + 3q'^2] &= 0,000000(\bar{8},5497600).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Сатурнъ и Земля.

$$\begin{aligned}
-(m', m'')(p'' - p^V) &= 0,000042(\bar{5},6192265), \\
\frac{1}{2}(m', m'')[2(p'' - p^V)(q''q^V + p''p^V) - p''((q'' - q^V)^2 + (p'' - p^V)^2) - 3p^V(p''^2 - p'^2) - 3q^V(q''p'' - q^Vp^V)] &= 0,000000(\bar{8},9308611), \\
(m', m'')_1 (p'' - p^V)[l''^2 + h''^2 + l'^2 + h'^2] &= 0,000000(\bar{8},3818129), \\
(m', m'')_4 (p'' - p^V)[l''^2 + h''^2 + l'^2 + h'^2] &= -0,000000(\bar{7},3473420), \\
(m', m'')_2 [(l''^2 - h''^2)(p'' - p^V) - 2l''h''(q'' - q^V)] &= -0,000000(\bar{9},5046785), \\
\overline{(m', m'')} [(l''^2 - h''^2)(p'' - p^V) - 2l''h''(q'' - q^V)] &= 0,000000(\bar{9},4763436), \\
(m', m'')_{13} [(l'^2 - h'^2)(p'' - p^V) - 2l'h^V(q'' - q^V)] &= -0,000000(\bar{8},9955272), \\
(m', m'')_{14} [(l'^2 - h'^2)(p'' - p^V) - 2l'h^V(q'' - q^V)] &= 0,000000(\bar{7},3661880), \\
2(m', m'')_{15} [(l'l^V + h'h^V)(p'' - p^V) + (h''l^V - h^Vl'')q''] &= 0,000000(\bar{7},5671032), \\
2(m', m'')_{16} [(l'l^V + h'h^V)(p'' - p^V) + (h''l^V - h^Vl'')q''] &= -0,000000(\bar{7},5822193), \\
\frac{1}{3}(m', m'')_4 [(p'' - p^V)^3 + (p'' - p^V)(q'' - q^V)^2 + q''(p''q^V - p^Vq'')] &= -0,000000(\bar{8},6121473), \\
(m', m'')_1 [(p'' - p^V)^3 + (p'' - p^V)(q'' - q^V)^2 + q''(p''q^V - p^Vq'')] &= 0,000000(\bar{8},1237395), \\
\overline{(m', m'')} [(p'' - p^V)^3 + (p'' - p^V)(q'' - q^V)^2 - 2q''(p''q^V - p^Vq'')] &= 0,000000(\bar{8},2900752), \\
\frac{1}{6}(m', m'')_4 [(p'' - p^V)^3 + (p'' - p^V)(q'' - q^V)^2 - 2q''(p''q^V - p^Vq'')] &= -0,000000(\bar{8},3111173), \\
(m', m'')_{10} [2l'l^V(p'' - p^V) + (h''l^V + h^Vl'')q^V - 2l^Vh''q''] &= 0,000000(\bar{8},2052796), \\
(m', m'')_{11} [2l'l^V(p'' - p^V) + (h''l^V + h^Vl'')q^V - 2l^Vh''q''] &= 0,000000(\bar{8},2374918), \\
(m', m'')_{12} [2l'l^V(p'' - p^V) + (h''l^V + h^Vl'')q^V - 2l^Vh''q''] &= -0,000000(\bar{10},2757864), \\
\frac{1}{2}(m', m'')(p'' - p^V)(l'^2 + h'^2 + 3p'^2 + 3q'^2) &= -0,000000(\bar{7},2646930).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

*

Сатурнъ и Марсъ.

$$\begin{aligned}
& -(m^V m''') (p''' - p^V) = 0,000005 (\bar{6},7320341), \\
& \frac{1}{2} (m^V m''') [2(p''' - p^V)(q''' q^V + p''' p^V) - p'''((q''' - q^V)^2 + (p''' - p^V)^2) - 3p^V(p'''^2 - p^V^2) - 3q^V(q''' p''' - q^V p^V)] \\
& \quad = 0,000000 (\bar{8},5951310), \\
& (m^V m''')_1 (p''' - p^V) (l'''^2 + h'''^2 + l^V^2 + h^V^2) = 0,000000 (\bar{9},4108020), \\
& (m^V m''')_4 (p''' - p^V) (l'''^2 + h'''^2 + l^V^2 + h^V^2) = -0,000000 (\bar{7},0190998), \\
& (m^V m''')_2 [(l'''^2 - h'''^2)(p''' - p^V) - 2l''' h''' (q''' - q^V)] = -0,000000 (\bar{8},2056106), \\
& \overline{(m^V m''')} [(l'''^2 - h'''^2)(p''' - p^V) - 2l''' h''' (q''' - q^V)] = 0,000000 (\bar{8},1346752), \\
& (m^V m''')_{13} [(l^V^2 - h^V^2)(p''' - p^V) - 2l^V h^V (q''' - q^V)] = -0,000000 (\bar{8},0930830), \\
& (m^V m''')_{14} [(l^V^2 - h^V^2)(p''' - p^V) - 2l^V h^V (q''' - q^V)] = 0,000000 (\bar{8},4672461), \\
& 2(m^V m''')_{15} [(l''' l^V + h''' h^V)(p''' - p^V) + (h''' l^V - h^V l''') q'''] = 0,000000 (\bar{7},1128936), \\
& 2(m^V m''')_{16} [(l''' l^V + h''' h^V)(p''' - p^V) + (h''' l^V - h^V l''') q'''] = -0,000000 (\bar{7},1486177), \\
& \frac{1}{3} (m^V m''')_4 [(p''' - p^V)^3 + (p''' - p^V)(q''' - q^V)^2 + q'''(p''' q^V - p^V q''')] = -0,000000 (\bar{9},9969660), \\
& (m^V m''')_1 [(q''' - q^V)^3 + (p''' - p^V)(q''' - q^V)^2 + q'''(p''' q^V - p^V q''')] = 0,000000 (\bar{10},8657895), \\
& \overline{(m^V m''')}_1 [(p''' - p^V)^3 + (p''' - p^V)(q''' - q^V)^2 - 2q'''(p''' q^V - p^V q''')] = -0,000000 (\bar{9},3326062), \\
& \frac{1}{6} (m^V m''')_4 [(p''' - p^V)^3 + (p''' - p^V)(q''' - q^V)^2 - 2p'''(p''' q^V - p^V q''')] = 0,000000 (\bar{9},3819839), \\
& (m^V m''')_{10} [2l''' l^V (p''' - p^V) + (h''' l^V + h^V l''') q^V - 2l^V h''' q'''] = -0,000000 (\bar{8},9685606), \\
& (m^V m''')_{11} [2l''' l^V (p''' - p^V) + (h''' l^V + h^V l''') q^V - 2l^V h''' q'''] = -0,000000 (\bar{7},0433464), \\
& (m^V m''')_{12} [2l''' l^V (p''' - p^V) + (h''' l^V + h^V l''') q^V - 2l^V h''' q'''] = 0,000000 (\bar{9},4809644), \\
& \frac{1}{2} (m^V m^V) (p''' - p^V) (l^V^2 + h^V^2 + 3p^V^2 + 3q^V^2) = -0,000000 (\bar{8},3775006).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Сатурнъ и Юпитеръ.

$$\begin{aligned}
& -(m^V m^{IV}) (p^{IV} - p^V) = 0,322360 (\bar{1},5083418), \\
& \frac{1}{2} (m^V m^{IV}) [2(p^{IV} - p^V)(q^{IV} q^V + p^{IV} p^V) - p^{IV}((q^{IV} - q^V)^2 + (p^{IV} - p^V)^2) - 3p^V(p^{IV^2} - p^V^2) - 3q^V(q^{IV} p^{IV} - q^V p^V)] \\
& \quad = 0,000858 (\bar{4},9333031), \\
& (m^V m^{IV})_1 (p^{IV} - p^V) [l^V^2 + h^V^2 + l^{IV^2} + h^{IV^2}] = 0,001595 (\bar{3},2027950), \\
& (m^V m^{IV})_4 (p^{IV} - p^V) [l^{IV^2} + h^{IV^2} + l^V^2 + h^V^2] = -0,007786 (\bar{3},8913297), \\
& (m^V m^{IV})_2 [(l^{IV^2} - h^{IV^2})(p^{IV} - p^V) - 2l^{IV} h^{IV} (q^{IV} - q^V)] = 0,000440 (\bar{4},6440147),
\end{aligned}$$

$$\begin{aligned}
\overline{(m', m'')}_1 [(l'^2 - h'^2)(p'' - p') - 2l'h'(q'' - q')] &= 0,000551 (\bar{4}, 7414613), \\
(m', m'')_{13} [(l'^2 - h'^2)(p'' - p') - 2l'h'(q'' - q')] &= -0,001404 (\bar{3}, 1475850), \\
(m', m'')_{14} [(l'^2 - h'^2)(p'' - p') - 2l'h'(q'' - q')] &= 0,003775 (\bar{3}, 5769717), \\
2(m', m'')_{15} [(l'l' + h'h')(p'' - p') + (h'l' - l'h')q''] &= 0,000025 (\bar{5}, 3925563), \\
2(m', m'')_{16} [(l'l' + h'h')(p'' - p') + (h'l' - l'h')q''] &= -0,000109 (\bar{4}, 0381351), \\
\frac{1}{3}(m', m'')_4 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 + q''(p''q' - p'q'')] &= -0,000204 (\bar{4}, 3101105), \\
(m', m'')_1 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 + q''(p''q' - p'q'')] &= 0,000125 (\bar{4}, 0986971), \\
\overline{(m', m'')}_1 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 - 2q''(p''q' - p'q'')] &= 0,000018 (\bar{5}, 2676970), \\
\frac{1}{6}(m', m'')_4 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 - 2q''(p''q' - p'q'')] &= -0,000137 (\bar{4}, 1374235), \\
(m', m'')_{10} [2l'l'(p'' - p') + (h'l' + h'l'')q' - 2l'h''q''] &= -0,000510 (\bar{4}, 7078055), \\
(m', m'')_{11} [2l'l'(p'' - p') + (h'l' + h'l'')q' - 2l'h''q''] &= -0,004130 (\bar{3}, 6159549), \\
(m', m'')_{12} [2l'l'(p'' - p') + (h'l' + h'l'')q' - 2l'h''q''] &= 0,000874 (\bar{4}, 9418015), \\
\frac{1}{2}(m', m'')(p'' - p')(l'^2 + h'^2 + 3p'^2 + 3q'^2) &= -0,001424 (\bar{3}, 1538083).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000398.

Сатурнъ и Уранъ.

$$\begin{aligned}
-(m', m'')(p'' - p') &= 0,010625 (\bar{2}, 0263515), \\
\frac{1}{2}(m', m'')[2(p'' - p')(q''q' + p''p') - p''(q'' - q')^2 + (p'' - p'')^2 - 3p''(p''q'' - p'q'') - 3q''(q''p'' - q'p'')] &= 0,000033 (\bar{5}, 5214559), \\
(m', m'')_1 [l''^2 + h''^2 + l'^2 + h'^2](p'' - p') &= 0,000037 (\bar{5}, 5686800), \\
(m', m'')_4 (p'' - p')[l''^2 + h''^2 + l'^2 + h'^2] &= -0,000205 (\bar{4}, 3120368), \\
(m', m'')_2 [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= 0,000006 (\bar{6}, 7541700), \\
\overline{(m', m'')}_1 [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= 0,000005 (\bar{6}, 6872404), \\
(m', m'')_{13} [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= -0,000041 (\bar{5}, 6090542), \\
(m', m'')_{14} [(l''^2 - h''^2)(p'' - p') - 2l''h''(q'' - q')] &= 0,000107 (\bar{4}, 0297972), \\
2(m', m'')_{15} [(l'l'' + h'h'')(p'' - p') + (h'l'' - h'l'')q''] &= 0,000009 (\bar{6}, 9434791), \\
2(m', m'')_{16} [(l'l'' + h'h'')(p'' - p') + (h'l'' - h'l'')q''] &= -0,000026 (\bar{5}, 4237346), \\
\frac{1}{3}(m', m'')_4 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 + q''(p''q' - p'q'')] &= -0,000016 (\bar{5}, 1935303), \\
(m', m'')_1 [(p'' - p')^3 + (p'' - p')(q'' - q')^2 + q''(p''q' - p'q'')] &= 0,000008 (\bar{6}, 9272948),
\end{aligned}$$

$$\begin{aligned}
(\overline{m^V m^{VI}})_1 [(p^{VI} - p^V)^3 + (p^{VI} - p^V)(q^{VI} - q^V)^2 - 2q^{VI}(p^{VI}q^V - p^Vq^{VI})] &= 0,000001(\bar{6},1990158), \\
\frac{1}{6}(\overline{m^V m^{VI}})_4 [(p^{VI} - p^V)^3 + (p^{VI} - p^V)(q^{VI} - q^V)^2 - 2q^{VI}(p^{VI}q^V - p^Vq^{VI})] &= -0,000007(\bar{6},8315015), \\
(\overline{m^V m^{VI}})_{10} [2l^{VI}l^{VI}(p^{VI} - p^V) + (h^{VI}l^V + h^Vl^{VI})q^V - 2l^Vh^{VI}q^{VI}] &= 0,000000(\bar{7},7470839), \\
(\overline{m^V m^{VI}})_{11} [2l^{VI}l^{VI}(p^{VI} - p^V) + (h^{VI}l^V + h^Vl^{VI})q^V - 2l^Vh^{VI}q^{VI}] &= 0,000003(\bar{6},4921270), \\
(\overline{m^V m^{VI}})_{12} [2l^{VI}l^{VI}(p^{VI} - p^V) + (h^{VI}l^V + h^Vl^{VI})q^V - 2l^Vh^{VI}q^{VI}] &= -0,000000(\bar{7},7667106), \\
\frac{1}{2}(\overline{m^V m^{VI}})(p^{VI} - p^V)(l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}) &= -0,000047(\bar{5},6718180).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $-0,000047$.

Уранъ и Меркурій.

$$\begin{aligned}
-(\overline{m^{VI}m})(p - p^{VI}) &= -0,000000(\bar{7},0733967), \\
\frac{1}{2}(\overline{m^{VI}m})[2(p - p^{VI})(qq^{VI} + pp^{VI}) - p((q - q^{VI})^2 + (p - p^{VI})^2) - 3p^{VI}(p^2 - p^{VI2}) - 3q^{VI}(qp - q^{VI}p^{VI})] \\
&= -0,000000(\bar{10},9960450) \\
(\overline{m^{VI}m})_1 (p - p^{VI})[l^2 + h^2 + l^{VI2} + h^{VI2}] &= -0,000000(\bar{12},5075361), \\
(\overline{m^{VI}m})_4 (p - p^{VI})[l^2 + h^2 + l^{VI2} + h^{VI2}] &= 0,000000(\bar{9},8978724), \\
(\overline{m^{VI}m})_2 [(l^2 - h^2)(p - p^{VI}) - 2lh(q - q^{VI})] &= 0,000000(\bar{9},2487250), \\
(\overline{m^{VI}m})[(l^2 - h^2)(p - p^{VI}) - 2lh(q - q^{VI})] &= -0,000000(\bar{9},2477286), \\
(\overline{m^{VI}m})_{13} [(l^{VI2} - h^{VI2})(p - p^{VI}) - 2l^{VI}h^{VI}(q - q^{VI})] &= -0,000000(\bar{10},0237958), \\
(\overline{m^{VI}m})_{14} [(l^{VI2} - h^{VI2})(p - p^{VI}) - 2l^{VI}h^{VI}(q - q^{VI})] &= 0,000000(\bar{10},3916250), \\
2(\overline{m^{VI}m})_{15} [(ll^{VI} + hh^{VI})(p - p^{VI}) + (hl^{VI} - h^{VI}l)q] &= -0,000000(\bar{8},7819522), \\
2(\overline{m^{VI}m})_{16} [(ll^{VI} + hh^{VI})(p - p^{VI}) + (hl^{VI} - h^{VI}l)q] &= 0,000000(\bar{8},7825011), \\
\frac{1}{3}(\overline{m^{VI}m})_4 [(p - p^{VI})^3 + (p - p^{VI})(q - q^{VI})^2 + q(pq^{VI} - p^{VI}q)] &= 0,000000(\bar{10},8318980), \\
(\overline{m^{VI}m})_1 [(p - p^{VI})^3 + (p - p^{VI})(q - q^{VI})^2 + q(pq^{VI} - p^{VI}q)] &= -0,000000(\bar{13},9185989), \\
(\overline{m^{VI}m})_1 [(p - p^{VI})^3 + (p - p^{VI})(q - q^{VI})^2 - 2q(pq^{VI} - p^{VI}q)] &= -0,000000(\bar{10},6178678) \\
\frac{1}{6}(\overline{m^{VI}m})_4 [(p - p^{VI})^3 + (p - p^{VI})(q - q^{VI})^2 - 2q(pq^{VI} - p^{VI}q)] &= 0,000000(\bar{10},6186414) \\
(\overline{m^{VI}m})_{10} [2ll^{VI}(p - p^{VI}) + (hl^{VI} + h^{VI}l)q^{VI} - 2l^{VI}hq] &= -0,000000(\bar{8},1304487), \\
(\overline{m^{VI}m})_{11} [2ll^{VI}(p - p^{VI}) + (hl^{VI} + h^{VI}l)q^{VI} - 2l^{VI}hq] &= -0,000000(\bar{8},1316424), \\
(\overline{m^{VI}m})_{12} [2ll^{VI}(p - p^{VI}) + (hl^{VI} + h^{VI}l)q^{VI} - 2l^{VI}hq] &= 0,000000(\bar{12},7922860), \\
\frac{1}{2}(\overline{m^{VI}m})(p - p^{VI})[l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}] &= 0,000000(\bar{10},2070474).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = $0,000000$.

Уранъ и Венера.

$$\begin{aligned}
&-(m', m')(p' - p^{VI}) = -0,000002(\bar{6}, 2594161), \\
&\frac{1}{2}(m', m')[2(p' - p^{VI})(q'q^{VI} + p'p^{VI}) - p'((q' - q^{VI})^2 + (p' - p^{VI})^2) - 3p^{VI}(p'^2 - p^{VI2}) - 3q^{VI}(q'p' - q^{VI}p^{VI})] \\
&\quad = -0,000000(\bar{9}, 5585015), \\
&(m', m')_1(p' - p^{VI})(l'^2 + h'^2 + l'^{VI2} + h'^{VI2}) = -0,000000(\bar{12}, 9358726), \\
&(m', m')_4(p' - p^{VI})(l'^2 + h'^2 + l'^{VI2} + h'^{VI2}) = 0,000000(\bar{9}, 7838574), \\
&(m', m')_2[(l'^2 - h'^2)(p' - p^{VI}) - 2l'h'(q' - q^{VI})] = -0,000000(\bar{13}, 9149051), \\
&\overline{(m', m')}[(l'^2 - h'^2)(p' - p^{VI}) - 2l'h'(q' - q^{VI})] = 0,000000(\bar{13}, 9113988), \\
&(m', m')_{13}[(l'^{VI2} - h'^{VI2})(p' - p^{VI}) - 2l^{VI}h^{VI}(q' - q^{VI})] = -0,000000(\bar{9}, 4794630), \\
&(m', m')_{14}[(l'^{VI2} - h'^{VI2})(p' - p^{VI}) - 2l^{VI}h^{VI}(q' - q^{VI})] = 0,000000(\bar{9}, 8477797), \\
&2(m', m')_{15}[(l'l^{VI} + h'h^{VI})(p' - p^{VI}) + (h'l^{VI} - h^{VI}l')q'] = -0,000000(\bar{9}, 9362527), \\
&2(m', m')_{16}[(l'l^{VI} + h'h^{VI})(p' - p^{VI}) + (h'l^{VI} - h^{VI}l')q'] = 0,000000(\bar{9}, 9381568), \\
&\frac{1}{3}(m', m')_4[(p' - p^{VI})^3 + (p' - p^{VI})(q' - q^{VI})^2 + q'(p'q^{VI} - p^{VI}q')] = 0,000000(\bar{9}, 2831096), \\
&(m', m')_1[(p' - p^{VI})^3 + (p' - p^{VI})(q' - q^{VI})^2 + q'(p'q^{VI} - p^{VI}q')] = -0,000000(\bar{12}, 9122461), \\
&\overline{(m', m')}_1[(p' - p^{VI})^3 + (p' - p^{VI})(q' - q^{VI})^2 - 2q'(p'q^{VI} - p^{VI}q')] = -0,000000(\bar{10}, 9567079), \\
&\frac{1}{6}(m', m')_4[(p' - p^{VI})^3 + (p' - p^{VI})(q' - q^{VI})^2 - 2q'(p'q^{VI} - p^{VI}q')] = 0,000000(\bar{10}, 9763963), \\
&(m', m')_{10}[2l'l^{VI}(p' - p^{VI}) + (h'l^{VI} + h^{VI}l')q^{VI} - 2l^{VI}h'q'] = 0,000000(\bar{8}, 2343166), \\
&(m', m')_{11}[2l'l^{VI}(p' - p^{VI}) + (h'l^{VI} + h^{VI}l')q^{VI} - 2l^{VI}h'q'] = 0,000000(\bar{8}, 2384844), \\
&(m', m')_{12}[2l'l^{VI}(p' - p^{VI}) + (h'l^{VI} + h^{VI}l')q^{VI} - 2l^{VI}h'q'] = -0,000000(\bar{11}, 4413443), \\
&\frac{1}{2}(m', m')(p' - p^{VI})[l'^{VI2} + h'^{VI2} + 3q'^{VI2} + 3p'^{VI2}] = 0,000000(\bar{9}, 3930668),
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Уранъ и Земля.

$$\begin{aligned}
&-(m', m'')(p'' - p^{VI}) = 0,000001(\bar{6}, 0556654), \\
&\frac{1}{2}(m', m'')[2(p'' - p^{VI})(q''q^{VI} + p''p^{VI}) - p''((q'' - q^{VI})^2 + (p'' - p^{VI})^2) - 3p^{VI}(p''^2 - p^{VI2}) - 3q^{VI}(q''p'' - q^{VI}p^{VI})] \\
&\quad = 0,000000(\bar{10}, 4938163), \\
&(m', m')_1(p' - p^{VI})[l'^2 + h'^2 + l'^{VI2} + h'^{VI2}] = 0,000000(\bar{11}, 0582795), \\
&(m', m')_4(p'' - p^{VI})[l'^2 + h'^2 + l'^{VI2} + h'^{VI2}] = -0,000000(\bar{9}, 6257213), \\
&(m', m')_2[(l'^2 - h'^2)(p'' - p^{VI}) - 2l'h''(q'' - q^{VI})] = -0,000000(\bar{11}, 8318790),
\end{aligned}$$

$$\begin{aligned}
(\overline{m^{VI}m''})[(l''^2 - h''^2)(p'' - p^{VI}) - 2l''h''(q'' - q^{VI})] &= 0,000000(\overline{11},8251568), \\
(m^{VI}m'')_{13}[(l^{VI2} - h^{VI2})(p'' - p^{VI}) - 2l^{VI}h^{VI}(q'' - q^{VI})] &= 0,000000(\bar{9},2848265), \\
(m^{VI}m'')_{14}[(l^{VI2} - h^{VI2})(p'' - p^{VI}) - 2l^{VI}h^{VI}(q'' - q^{VI})] &= -0,000000(\bar{9},6534697), \\
2(m^{VI}m'')_{15}[(l''l^{VI} + h''h^{VI})(p'' - p^{VI}) + (h''l^{VI} - l''h^{VI})q''] &= 0,000000(\bar{9},8060427), \\
2(m^{VI}m'')_{16}[(l''l^{VI} + h''h^{VI})(p'' - p^{VI}) + (h''l^{VI} - l''h^{VI})q''] &= -0,000000(\bar{9},8097418), \\
\frac{1}{3}(m^{VI}m'')_4[(p'' - p^{VI})^3 + (p'' - p^{VI})(q'' - q^{VI})^2 + q''(p''q^{VI} - p^{VI}q'')] &= -0,000000(\overline{10},0204054), \\
(m^{VI}m'')_4[(p'' - p^{VI})^3 + (p'' - p^{VI})(q'' - q^{VI})^2 + q''(p''q^{VI} - p^{VI}q'')] &= 0,000000(\overline{13},9300849), \\
(\overline{m^{VI}m''})_1[(p'' - p^{VI})^3 + (p'' - p^{VI})(q'' - q^{VI})^2 - 2q''(p''q^{VI} - p^{VI}q'')] &= 0,000000(\overline{11},7143034), \\
\frac{1}{6}(m^{VI}m'')_4[(p'' - p^{VI})^3 + (p'' - p^{VI})(q'' - q^{VI})^2 - 2q''(p''q^{VI} - p^{VI}q'')] &= -0,000000(\overline{11},7193754), \\
(m^{VI}m'')_{10}[2l''l^{VI}(p'' - p^{VI}) + (h''l^{VI} + h^{VI}l'')q^{VI} - 2l^{VI}h''q''] &= -0,000000(\bar{9},8515773), \\
(m^{VI}m'')_{11}[2l''l^{VI}(p'' - p^{VI}) + (h''l^{VI} + l''h^{VI})q^{VI} - 2l^{VI}h''q''] &= -0,000000(\bar{9},8595429), \\
(m^{VI}m'')_{12}[2l''l^{VI}(p'' - p^{VI}) + (h''l^{VI} + l''h^{VI})q^{VI} - 2l^{VI}h''q''] &= 0,000000(\overline{11},3426660), \\
\frac{1}{2}(m^{VI}m'')(p'' - p^{VI})[l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}] &= -0,000000(\bar{9},1893161).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Уранъ и Марсъ.

$$\begin{aligned}
-(m^{VI}m''')(p''' - p^{VI}) &= -0,000000(\bar{7},4854074), \\
\frac{1}{2}(m^{VI}m''')[2(p''' - p^{VI})(q'''q^{VI} + p'''p^{VI}) - p'''((q''' - q^{VI})^2 + (p''' - p^{VI})^2) - 3p^{VI}(p'''^2 - p^{VI2}) - 3q^{VI}(q'''p''' - q^{VI}p^{VI})] &= 0,000000(\bar{9},4904653), \\
(m^{VI}m''')_1(p''' - p^{VI})[l'''^2 + h'''^2 + l^{VI2} + h^{VI2}] &= -0,000000(\overline{11},5028390), \\
(m^{VI}m''')_4(p''' - p^{VI})[l'''^2 + h'''^2 + l^{VI2} + h^{VI2}] &= 0,000000(\bar{9},7066249), \\
(m^{VI}m''')_2[(l'''^2 - h'''^2)(p''' - p^{VI}) - 2l'''h'''(q''' - q^{VI})] &= -0,000000(\bar{9},0990572), \\
(\overline{m^{VI}m'''})[(l'''^2 - h'''^2)(p''' - p^{VI}) - 2l'''h'''(q''' - q^{VI})] &= 0,000000(\bar{9},0831892), \\
(m^{VI}m''')_{13}[(l^{VI2} - h^{VI2})(p''' - p^{VI}) - 2l^{VI}h^{VI}(q''' - q^{VI})] &= -0,000000(\overline{10},9004153), \\
(m^{VI}m''')_{14}[(l^{VI2} - h^{VI2})(p''' - p^{VI}) - 2l^{VI}h^{VI}(q''' - q^{VI})] &= 0,000000(\bar{9},0699368), \\
2(m^{VI}m''')_{15}[(l'''l^{VI} + h'''h^{VI})(p''' - p^{VI}) + (h'''l^{VI} - h^{VI}l''')q'''] &= 0,000000(\bar{9},8836580), \\
2(m^{VI}m''')_{16}[(l'''l^{VI} + h'''h^{VI})(p''' - p^{VI}) + (l^{VI}h''' - h^{VI}l''')q'''] &= -0,000000(\bar{9},8922866), \\
\frac{1}{3}(m^{VI}m''')_4[(p''' - p^{VI})^3 + (p''' - p^{VI})(q''' - q^{VI})^2 + q'''(p'''q^{VI} - p^{VI}q''')] &= 0,000000(\overline{11},0726879), \\
(m^{VI}m''')_4[(p''' - p^{VI})^3 + (p''' - p^{VI})(q''' - q^{VI})^2 + q'''(p'''q^{VI} - p^{VI}q''')] &= -0,000000(\overline{13},3460233),
\end{aligned}$$

$$\begin{aligned}
\overline{(m^{VI}m''')}_{11} [(p''' - p^{VI})^3 + (p''' - p^{VI})(q''' - q^{VI})^2 - 2q'''(p'''q^{VI} - p^{VI}q''')] &= -0,000000(\overline{11},9432501), \\
\frac{1}{6}(m^{VI}m''')_{12} [(p''' - p^{VI})^3 + (p''' - p^{VI})(q''' - q^{VI})^2 - 2q'''(p'''q^{VI} - p^{VI}q''')] &= 0,000000(\overline{11},9552666), \\
(m^{VI}m''')_{10} [2l'''l^{VI}(p''' - p^{VI}) + (h'''l^{VI} + h^{VI}l''')q^{VI} - 2l^{VI}h'''q'''] &= -0,000000(\overline{8},5560649), \\
(m^{VI}m''')_{11} [2l^{VI}l'''(p''' - p^{VI}) + (h'''l^{VI} + h^{VI}l''')q^{VI} - 2l^{VI}h'''q'''] &= -0,000000(\overline{8},5745579), \\
(m^{VI}m''')_{12} [2l'''l^{VI2}(p''' - p^{VI}) + (h'''l^{VI} + h^{VI}l''')q^{VI} - 2l^{VI}h'''q'''] &= 0,000000(\overline{11},4205739), \\
\frac{1}{2}(m^{VI}m''')(p''' - p^{VI})(l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}) &= 0,000000(\overline{10},6190581).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000000.

Уранъ и Юпитеръ.

$$\begin{aligned}
-(m^{VI}m^{IV})(p^{IV} - p^{VI}) &= -0,009144(\overline{3},9611574), \\
\frac{1}{2}(m^{VI}m^{IV})[2(p^{IV} - p^{VI})(q^{IV}q^{VI} + p^{IV}p^{VI}) - p^{IV}((q^{IV} - q^{VI})^2 + (p^{IV} - p^{VI})^2) - 3p^{VI}(p^{IV2} - p^{VI2}) - 3q^{VI}(q^{IV}p^{IV} - q^{VI}p^{VI})] &= -0,000005(\overline{6},6654469), \\
(m^{VI}m^{IV})_1 (p^{IV} - p^{VI})[l^{IV2} + h^{IV2} + l^{VI2} + h^{VI2}] &= -0,000005(\overline{6},7227182), \\
(m^{VI}m^{IV})_4 (p^{IV} - p^{VI})[l^{IV2} + h^{IV2} + l^{VI2} + h^{VI2}] &= 0,000079(\overline{5},8988931), \\
(m^{VI}m^{IV})_2 [(l^{IV2} - h^{IV2})(p^{IV} - p^{VI}) - 2l^{IV}h^{IV}(q^{IV} - q^{VI})] &= -0,000007(\overline{6},8476990), \\
\overline{(m^{VI}m^{IV})} [(l^{IV2} - h^{IV2})(p^{IV} - p^{VI}) - 2l^{IV}h^{IV}(q^{IV} - q^{VI})] &= 0,000004(\overline{6},5711407), \\
(m^{VI}m^{IV})_{13} [(l^{VI2} - h^{VI2})(p^{IV} - p^{VI}) - 2l^{VI}h^{VI}(q^{IV} - q^{VI})] &= -0,000010(\overline{5},0006805), \\
(m^{VI}m^{IV})_{14} [(l^{VI2} - h^{VI2})(p^{IV} - p^{VI}) - 2h^{VI}l^{VI}(q^{IV} - q^{VI})] &= 0,000024(\overline{5},3860472), \\
2(m^{VI}m^{IV})_{15} [(l^{IV}l^{VI} + h^{IV}h^{VI})(p^{IV} - p^{VI}) + (h^{IV}l^{VI} - h^{VI}l^{IV})q^{IV}] &= 0,000059(\overline{5},7721604), \\
2(m^{VI}m^{IV})_{16} [(l^{IV}l^{VI} + h^{IV}h^{VI})(p^{IV} - p^{VI}) + (h^{IV}l^{VI} - h^{VI}l^{IV})q^{IV}] &= -0,000076(\overline{5},8815663), \\
\frac{1}{3}(m^{VI}m^{IV})_4 [(p^{IV} - p^{VI})^3 + (p^{IV} - p^{VI})(q^{IV} - q^{VI})^2 + q^{IV}(p^{IV}q^{VI} - p^{VI}q^{IV})] &= 0,000000(\overline{7},7824751), \\
(m^{VI}m^{IV})_1 [(p^{IV} - p^{VI})^3 + (p^{IV} - p^{VI})(q^{IV} - q^{VI})^2 + q^{IV}(p^{IV}q^{VI} - p^{VI}q^{IV})] &= -0,000000(\overline{7},0834215), \\
\overline{(m^{VI}m^{IV})}_1 [(p^{IV} - p^{VI})^3 + (p^{IV} - p^{VI})(q^{IV} - q^{VI})^2 - 2q^{IV}(p^{IV}q^{VI} - p^{VI}q^{IV})] &= -0,000000(\overline{7},6609792), \\
\frac{1}{6}(m^{VI}m^{IV})_4 [(p^{IV} - p^{VI})^3 + (p^{IV} - p^{VI})(q^{IV} - q^{VI})^2 - 2q^{IV}(p^{IV}q^{VI} - p^{VI}q^{IV})] &= 0,000000(\overline{7},8496682), \\
(m^{VI}m^{IV})_{10} [2l^{IV}l^{VI}(p^{IV} - p^{VI}) + (h^{IV}l^{VI} + h^{VI}l^{IV})q^{VI} - 2l^{VI}h^{IV}q^{IV}] &= -0,000089(\overline{5},9492688), \\
(m^{VI}m^{IV})_{11} [2l^{IV}l^{VI}(p^{IV} - p^{VI}) + (h^{VI}l^{VI} + h^{IV}l^{VI})q^{VI} - 2l^{VI}h^{IV}q^{IV}] &= -0,000146(\overline{4},1652522), \\
(m^{VI}m^{IV})_{12} [2l^{IV}l^{VI}(p^{IV} - p^{VI}) + (h^{IV}l^{VI} + h^{VI}l^{IV})q^{VI} - 2l^{VI}h^{IV}q^{IV}] &= 0,000011(\overline{5},0265863), \\
\frac{1}{2}(m^{VI}m^{IV})(p^{IV} - p^{VI})(l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}) &= 0,000012(\overline{5},0948081).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,000199.

Уранъ и Сатурнъ.

$$\begin{aligned}
& -(m^{VI}m^V)(p^V - p^{VI}) = -0,038227 (\bar{2},5823808), \\
& \frac{1}{2}(m^{VI}m^V)[2(p^V - p^{VI})(q^V q^{VI} + p^V p^{VI}) - p^V((q^V - q^{VI})^2 + (p^V - p^{VI})^2) - 3p^{VI}(p^{V2} - p^{VI2}) - 3q^{VI}(q^V p^V - q^{VI} p^{VI})] \\
& \quad = -0,000049 (\bar{5},6890225), \\
& (m^{VI}m^V)_1(p^V - p^{VI})[l^{V2} + h^{V2} + l^{VI2} + h^{VI2}] = -0,000133 (\bar{4},1247093), \\
& (m^{VI}m^V)_4(p^V - p^{VI})[l^{VI} + h^{V2} + l^{V2} + h^{VI2}] = 0,000738 (\bar{4},8680641), \\
& (m^{VI}m^V)_2[(l^{V2} - h^{V2})(p^V - p^{VI}) - 2l^V h^V(q^V - q^{VI})] = 0,000049 (\bar{5},6871269), \\
& \overline{(m^{VI}m^V)}[(l^{V2} - h^{V2})(p^V - p^{VI}) - 2l^V h^V(q^V - q^{VI})] = 0,000042 (\bar{5},6201973), \\
& (m^{VI}m^V)_{13}[(l^{VI2} - h^{VI2})(p^V - p^{VI}) - 2l^{VI} h^{VI}(q^V - q^{VI})] = -0,000061 (\bar{5},7880307), \\
& (m^{VI}m^V)_{14}[(l^{VI2} - h^{VI2})(p^V - p^{VI}) - 2l^{VI} h^{VI}(q^V - q^{VI})] = 0,000161 (\bar{4},2087737), \\
& 2(m^{VI}m^V)_{15}[(l^V l^{VI} + h^V h^{VI})(p^V - p^{VI}) + (h^V l^{VI} - h^{VI} l^V)q^V] = -0,000132 (\bar{4},1204436), \\
& 2(m^{VI}m^V)_{16}[(l^V l^{VI} + h^V h^{VI})(p^V - p^{VI}) + (h^V l^{VI} - h^{VI} l^V)q^V] = 0,000399 (\bar{4},6006991), \\
& \frac{1}{3}(m^{VI}m^V)_4[(p^V - p^{VI})^3 + (p^V - p^{VI})(q^V - q^{VI})^2 + q^V(p^V q^{VI} - p^{VI} q^V)] = 0,000043 (\bar{5},6394466), \\
& (m^{VI}m^V)_1[(p^V - p^{VI})^3 + (p^V - p^{VI})(q^V - q^{VI})^2 + q^V(p^V q^{VI} - p^{VI} q^V)] = -0,000024 (\bar{5},3732111), \\
& \overline{(m^{VI}m^V)}_1[(p^V - p^{VI})^3 + (p^V - p^{VI})(q^V - q^{VI})^2 - 2q^V(p^V q^{VI} - p^{VI} q^V)] = -0,000009 (\bar{6},9357511), \\
& \frac{1}{6}(m^{VI}m^V)_4[(p^V - p^{VI})^3 + (p^V - p^{VI})(q^V - q^{VI})^2 - 2q^V(p^V q^{VI} - p^{VI} q^V)] = 0,000037 (\bar{5},5680368), \\
& (m^{VI}m^V)_{10}[2l^V l^{VI}(p^V - p^{VI}) + (h^V l^{VI} + h^{VI} l^V)q^{VI} - 2l^{VI} h^V q^V] = -0,000104 (\bar{4},0173868), \\
& (m^{VI}m^V)_{11}[2l^V l^{VI}(p^V - p^{VI}) + (h^V l^{VI} + h^{VI} l^V)q^{VI} - 2l^{VI} h^V q^V] = -0,000579 (\bar{4},7624299), \\
& (m^{VI}m^V)_{12}[2l^V l^{VI}(p^V - p^{VI}) + (h^V l^{VI} + h^{VI} l^V)q^{VI} - 2l^{VI} h^V q^V] = 0,000109 (\bar{4},0370135), \\
& \frac{1}{2}(m^{VI}m^V)(p^V - p^{VI})[l^{VI2} + h^{VI2} + 3p^{VI2} + 3q^{VI2}] = 0,000052 (\bar{5},7160315).
\end{aligned}$$

Слѣд. сумма членовъ третьяго порядка = 0,001221.

(23) Всѣ предъидущія вычисленія были произведены при помощи слѣдующихъ данныхъ:

Меркурій.

$$h = 0,1979790 (\bar{1},2966192),$$

$$p = 0,0882739 (\bar{2},9458326),$$

$$l = 0,0555191 (\bar{2},7444426),$$

$$q = 0,0853867 (\bar{2},9313903),$$

Венера.

$$h' = 0,0053538 (\bar{3},7286622)$$

$$p' = 0,0572013 (\bar{2},7574056),$$

$$l' = -0,0042920 (\bar{3},6326614),$$

$$q' = 0,0154754 (\bar{2},1896431).$$

Земля.

$$\begin{aligned} h'' &= 0,0165616 (\bar{2},2191017), & l'' &= -0,0027738 (\bar{3},4430780), \\ p'' &= 0, & q'' &= 0. \end{aligned}$$

Марсъ.

$$\begin{aligned} h''' &= -0,0432145 (\bar{2},6356302), & l''' &= 0,0825946 (\bar{2},9169520), \\ p''' &= 0,0240235 (\bar{2},3806361), & q''' &= 0,0216355 (\bar{2},3251668), \end{aligned}$$

Юпитеръ.

$$\begin{aligned} h^{IV} &= 0,0092947 (\bar{3},9682361), & l^{IV} &= 0,0472567 (\bar{2},6744634), \\ p^{IV} &= 0,0226956 (\bar{2},3559422), & q^{IV} &= -0,0033632 (\bar{3},5267534). \end{aligned}$$

Сатурнъ.

$$\begin{aligned} h^V &= 0,0561441 (\bar{2},7493046), & l^V &= 0,00084386 (\bar{4},9262739), \\ p^V &= 0,0403916 (\bar{2},6062908), & q^V &= -0,0162662 (\bar{2},2112854). \end{aligned}$$

Уранъ.

$$\begin{aligned} h^{VI} &= 0,0100831 (\bar{2},0035953), & l^{VI} &= -0,0455071 (\bar{2},6580792), \\ p^{VI} &= 0,0129260 (\bar{2},1114653), & q^{VI} &= 0,0039545 (\bar{3},5970979). \end{aligned}$$

(24) Наконецъ, по формуламъ чл. 21, находимъ слѣдующія величины для годично-вѣковыхъ возмущеній въ наклоненіяхъ и въ долготахъ узловъ планетныхъ орбитъ :

Меркурій.

$$\begin{aligned} \delta J_1 &= 0,174313 + 0,000000 \mu + 0,064845 \mu' - 0,000005 \mu'' + 0,000315 \mu''' \\ &\quad + 0,099251 \mu^{IV} + 0,009874 \mu^V + 0,000033 \mu^{VI} \left. \vphantom{\delta J_1} \right\}, \\ &\quad - 0,047368 + 0,000091 \mu - 0,080579 \mu' + 0,014314 \mu'' + 0,000453 \mu''' \\ &\quad + 0,017556 \mu^{IV} + 0,000778 \mu^V + 0,000019 \mu^{VI} \left. \vphantom{\delta J_1} \right\}, \\ \delta N_1 &= -7,250970 - 0,065887 \mu - 3,866376 \mu' - 0,884119 \mu'' - 0,099068 \mu''' \\ &\quad - 2,220227 \mu^{IV} - 0,112900 \mu^V - 0,002393 \mu^{VI} \left. \vphantom{\delta N_1} \right\}, \\ &\quad - 1,085308 + 0,006062 \mu - 1,073317 \mu' - 0,029406 \mu'' + 0,007982 \mu''' \\ &\quad + 0,005281 \mu^{IV} - 0,001890 \mu^V - 0,000020 \mu^{VI} \left. \vphantom{\delta N_1} \right\}. \end{aligned}$$

*

Венера.

$$\begin{aligned}
\delta J_1' &= 0,038863 + 0,013019 \mu + 0,000000 \mu' + 0,000000 \mu'' - 0,002867 \mu''' \\
&\quad + 0,025373 \mu^{IV} + 0,003340 \mu^V - 0,000002 \mu^{VI} \\
&\quad - 0,002065 - 0,002971 \mu + 0,000227 \mu' + 0,000253 \mu'' + 0,000597 \mu''' \\
&\quad - 0,000098 \mu^{IV} - 0,000073 \mu^V \Bigg\}, \\
\delta N_1' &= -17,495875 + 0,112672 \mu - 5,173924 \mu' - 6,803374 \mu'' - 0,197508 \mu''' \\
&\quad - 5,155507 \mu^{IV} - 0,272891 \mu^V - 0,005343 \mu^{VI} \\
&\quad - 0,427358 - 0,040312 \mu - 0,168609 \mu' - 0,252177 \mu'' + 0,014123 \mu''' \\
&\quad + 0,018888 \mu^{IV} + 0,000680 \mu^V + 0,000049 \mu^{VI} \Bigg\}.
\end{aligned}$$

Марсъ.

$$\begin{aligned}
\delta J_1'' &= -0,020174 - 0,000233 \mu + 0,126001 \mu' + 0,000000 \mu'' + 0,000000 \mu''' \\
&\quad - 0,134007 \mu^{IV} - 0,011892 \mu^V - 0,000043 \mu^{VI} \\
&\quad + 0,010323 + 0,000115 \mu + 0,004644 \mu' - 0,000466 \mu'' + 0,000244 \mu''' \\
&\quad + 0,006060 \mu^{IV} - 0,000271 \mu^V - 0,000003 \mu^{VI} \Bigg\}, \\
\delta N_1'' &= -22,144320 - 0,214890 \mu - 8,161784 \mu' - 1,802211 \mu'' - 0,298197 \mu''' \\
&\quad - 11,205676 \mu^{IV} - 0,449674 \mu^V - 0,011888 \mu^{VI} \\
&\quad - 0,182037 + 0,017816 \mu - 0,313344 \mu' + 0,272244 \mu'' + 0,028623 \mu''' \\
&\quad - 0,193142 \mu^{IV} + 0,005476 \mu^V + 0,000290 \mu^{VI} \Bigg\}.
\end{aligned}$$

Юпитеръ.

$$\begin{aligned}
\delta J_1''' &= -0,207364 - 0,006403 \mu - 0,122489 \mu' + 0,000000 \mu'' - 0,007355 \mu''' \\
&\quad + 0,000000 \mu^{IV} - 0,071685 \mu^V + 0,000568 \mu^{VI} \\
&\quad - 0,002071 + 0,000646 \mu - 0,003786 \mu' + 0,000000 \mu'' + 0,000867 \mu''' \\
&\quad + 0,000195 \mu^{IV} + 0,000009 \mu^V - 0,000002 \mu^{VI} \Bigg\}, \\
\delta N_1''' &= -14,207845 - 0,214462 \mu - 12,242825 \mu' - 0,009030 \mu'' - 0,267970 \mu''' \\
&\quad - 7,053958 \mu^{IV} + 5,633552 \mu^V - 0,053152 \mu^{VI} \\
&\quad - 0,469532 + 0,016626 \mu - 0,403115 \mu' + 0,000000 \mu'' + 0,017531 \mu''' \\
&\quad + 0,026411 \mu^{IV} - 0,128230 \mu^V + 0,001245 \mu^{VI} \Bigg\}.
\end{aligned}$$

Сатурнъ.

$$\begin{aligned}
 \delta J_1'' &= -0,137812 - 0,007388 \mu - 0,184810 \mu' + 0,000000 \mu'' - 0,008651 \mu''' \\
 &\quad + 0,059813 \mu^{IV} + 0,000000 \mu^V + 0,003224 \mu^{VI} \left. \vphantom{\delta J_1''} \right\}, \\
 &\quad - 0,008082 + 0,000717 \mu - 0,005842 \mu' + 0,000000 \mu'' + 0,000939 \mu''' \\
 &\quad - 0,003733 \mu^{IV} - 0,000002 \mu^V - 0,000161 \mu^{VI} \left. \vphantom{\delta J_1''} \right\}, \\
 \delta N_1'' &= -18,910246 - 0,075650 \mu - 5,617733 \mu' - 0,001041 \mu'' - 0,097471 \mu''' \\
 &\quad - 12,497595 \mu^{IV} - 0,325535 \mu^V - 0,295221 \mu^{VI} \left. \vphantom{\delta N_1''} \right\}, \\
 &\quad - 0,133550 + 0,005053 \mu - 0,186219 \mu' + 0,000000 \mu'' + 0,004291 \mu''' \\
 &\quad + 0,039300 \mu^{VI} + 0,001377 \mu^V + 0,002648 \mu^{VI} \left. \vphantom{\delta N_1''} \right\}.
 \end{aligned}$$

Уранъ.

$$\begin{aligned}
 \delta J_1'' &= -0,033375 - 0,003678 \mu + 0,010016 \mu' + 0,000000 \mu'' - 0,004073 \mu''' \\
 &\quad + 0,060296 \mu^{IV} - 0,029185 \mu^V - 0,000001 \mu^{VI} \left. \vphantom{\delta J_1''} \right\}, \\
 &\quad + 0,002139 + 0,000419 \mu + 0,000553 \mu' + 0,000000 \mu'' + 0,000613 \mu''' \\
 &\quad - 0,000035 \mu^{IV} + 0,000589 \mu^V \left. \vphantom{\delta J_1''} \right\}, \\
 \delta N_1'' &= -32,889873 - 0,533196 \mu - 22,669177 \mu' + 0,000000 \mu'' - 0,646407 \mu''' \\
 &\quad - 10,313279 \mu^{IV} + 1,279555 \mu^V - 0,007369 \mu^{VI} \left. \vphantom{\delta N_1''} \right\}, \\
 &\quad - 0,682036 + 0,046007 \mu - 0,738047 \mu' + 0,000000 \mu'' + 0,054480 \mu''' \\
 &\quad + 0,032382 \mu^{IV} - 0,076858 \mu^V \left. \vphantom{\delta N_1''} \right\}.
 \end{aligned}$$

ЗАМѢЧЕННЫЯ ОПЕЧАТКИ.

Стран.	Строка.	Напечатано.	Должно читать.
4	17	$\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)^2$	$\left(\frac{\Delta r'}{a'} - \frac{\Delta r}{a}\right)^3$
17	18	$\cos(2\zeta' - 2N')$	$\cos(2\zeta - 2N')$
18	8	$[6C^{(0)} - 4C^{(1)}]$	$[6C^{(0)} + 3C^{(1)}]$
33	17	0",004068	0",004086
39	18	— 0",888002 ($\bar{1},9484140$)	— 0",000888 ($\bar{4},9484140$)
42	11	0",046088	0",049088
—	29	0",047251	0",050251
53	10	0",000480	— 0",000480
—	21	— 0",000009	— 0",000004
61	29	0",000435	0",000433
62	26	— 0",000342	— 0",000842
64	11	— 0",000106	— 0",000091
74	12	0",000002 ($\bar{6},4031226$)	0",000022 ($\bar{5},3479848$)
—	13	— 0",000003 ($\bar{6},5045217$)	— 0",000028 ($\bar{5},4493839$)
83	20	0",001001	0",001091
89	3	0",000002	— 0",000002
97	29	— 0",000000	— 0",000009
110	9	0,0000012368 <i>t</i>	0,0000012388 <i>t</i>
122	6	0",000001	— 0",000001
—	8	0",00005626	0",005626
126	11	— 0",000030	0",000030
127	27	0",000112	— 0",000112
136	7	0",000474	0",000464
138	2	— 0",000015	0",000015.

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Perevoščikov, Dmitrij Matveevič,

Věkovyja vozmuščeniija semi bolšich planet

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